

China in the Early Bronze Age

SHANG CIVILIZATION

Robert L. Thorp



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China in the Early Bronze Age

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China in the Early Bronze Age

Shang Civilization

Robert L. Thorp

PENN

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In Memoriam: Kwang-chih Chang
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A Note on Documentation

The text is furnished with notes that credit Chinese-language sources.

Books are cited by author, title (in Chinese romanization only) and date; unless otherwise noted, all publications were produced in Beijing.

Journals are cited by abbreviation (*KG*, *KJ*, *KX*, *WW*, *WZC* for *Kaogu*, *Kaoguxue jikan*, *Kaogu xuebao*, *Wenwu*, *Wenwu Ziliao Congkan* respectively), with year and issue number. Authorship is indicated when individuals are named; institutional (collective, group) authorship is not listed.

English-language sources will be found in the Suggested Reading section, by chapter.

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Preface

For anyone interested in ancient China, the last three decades have been a proverbial golden age. This era began in 1972, even before the chaos of the Great Proletarian Cultural Revolution (*wenhua da geming*) had subsided. Two actions taken by the government introduced the world to contemporary Chinese archaeology. First, the three national journals of archaeology and “cultural relics” work (Box 1) resumed publication after a hiatus since 1966. Month by month in 1972 reports and photographs of extraordinary discoveries appeared. Although archaeologists had

Box 1 What Are “Cultural Relics”?

Throughout this book, readers will encounter references to the phrase “cultural relics” (*wenwu*). For example, the organs of the state that manage archaeology include the Cultural Relics Bureau (recently renamed the Cultural Heritage Administration). Excavation teams are a part of provincial “institutes of cultural relics and archaeology” (*wenwu kaogu yanjiu suo*). And the leading press in China for many of the subjects discussed is Cultural Relics Publishing House (Wenwu chubanshe). What does this phrase designate?

As used since 1949, *wenwu* has been roughly akin to the English usages “material culture” and “cultural heritage.” “Cultural relics work” embraces archaeological surveys and excavations, restorations of historic architecture, the conservation, display, and publication of any of the foregoing, and more. By law, a cultural relic is any man-made thing that has putative historical, scientific, or aesthetic value. In contrast with the established categories of Euro-American practice, artifacts, works of art, crafts, and documents are all subsumed within this same category. Thus a Chinese

museum or exhibition abroad might display a Neolithic pot, a Song landscape painting, a Han text written on bamboo strips, and a fossilized Tang-period pastry. The category makes no invidious distinctions between recent and ancient, between fine art and craft, between anonymous products and signed work. Painting is not in some conventional sense superior to architecture, works by the elite are not of more interest than those from common people. Value is not determined by material (jade, gold) or authorship, but rather by cultural context.

As a practical matter, cultural relics have been classified according to circumstantial criteria. The Relics Bureau once had this institutionalized as three separate departments: “underground” relics (*dixia wenwu*); “aboveground” relics (*dishang wenwu*), and “circulating” relics (*liusan wenwu*). Paintings and porcelains from imperial and private collections comprised a large part of the last category. Aboveground relics comprised all manner of architecture and substantial monuments like temples and tombs, and some not so common outside China, like cave-chapels and cliff-face inscriptions. The underground category represents a great heritage bequeathed, not entirely intentionally, by the ancient peoples of China, the seemingly inexhaustible stock of archaeological finds. All of these objects, large and small, are rated in importance as grade 1, 2, or 3 relics. In the 1950s and 1960s, grade-1 items were requisitioned for the Historical and Palace Museums in Beijing. The “Chinese Exhibition” of the 1970s—which set all-time attendance records in both European and North American venues—was composed predominantly of grade-1 objects. On the other hand, the store rooms of provincial and local museums are stuffed to capacity with grade-3 objects, such as the huge quantities of pottery recovered from cemetery sites.

National legislation since the 1950s has protected and preserved important cultural relics, both above and below ground, from the Ming-Qing Forbidden City to the Neolithic wall at Chengziyai, Shandong. Local and provincial lists cover an even greater number of locales. Surveys of virtually every county in the PRC were conducted several times between the 1950s and 1990s, yielding a huge register of recorded sites and monuments, many still undeveloped. Population pressure and economic growth, especially since the late 1970s, have put great stress on many protected sites, such as Yinxu, Anyang, where new houses are constantly being built within the protected zone.

been sent down to May 7th cadre schools and even pig farms, as with the staff of the Institute of Archaeology (Box 2), significant strides had been made. And at about the same time, some of these discoveries—from Neolithic pots to Han burial shrouds and Yuan blue-and-white porcelain—became the signature objects for ambitious exhibitions sent to Europe

Box 2 The Institute of Archaeology

State control of scholarship has a long history in China, from the establishment of Erudites (Bo shi) to teach the Confucian Classics in the Han period to Qing compendia like the “Complete Library in Four Branches” (*Siku quanshu*). In August 1950, the people’s government established the Institute of Archaeology (Kaogu yanjiusuo) in Beijing, one of the first institutes under the Chinese Academy of Sciences (Zhongguo kexueyuan). The academy’s first head was the poet, scholar of literature, ancient history, epigraphy, and Marxist theorist Guo Moruo (1892–1978). The first director of the institute was Zheng Zhenduo, also then heading the Cultural Relics Bureau. (Xia Nai assumed the duties of director from 1963 to 1982.) Starting with a modest cohort of twenty, the institute has grown over time to 300 professional and support staff (about half officially “retired” although many are still active).

Over the fifty years of its existence, the Institute of Archaeology has taken the lead in all areas of Chinese archaeology except only studies of early man and the paleolithic, which are based in the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP). In the 1950s, the institute was charged with training a cohort of 341 archaeological field workers in four classes. It also supplied many faculty for the Archaeology Specialization (later Department) at Peking University. In 1977, the Institute of Archaeology was transferred to the Academy of Social Sciences, where it rubs shoulders with units devoted to history, world religions, and other social sciences and humanities. This realignment institutionalized the historiographical orientation of contemporary Chinese archaeological research.

The institute is organized into several sections: prehistory, Xia-Shang-Zhou, Han through Tang, border areas, world archaeology, a technology and laboratory center, a library and data center, and a publications division. Outside Beijing, it maintains work stations at Anyang, Luoyang, and Xi’an. It has additional bases in Xinjiang, Shandong, the Erlitou and Shang wall sites in Yanshi (Henan), the

Han-Wei city at Luoyang, the Feng-Hao sites near Xi'an, and the Lilihe site near Beijing. In recent years, the institute has sent excavation teams into twenty-seven provinces and autonomous regions. It also offers graduate training in archaeology at the masters and doctoral levels. It opened the first carbon-14 laboratory in China, and scientific applications remain one of its strong suits. Institute publications include over sixty monographic excavation reports, and the prestigious journals *Archaeology* (Kaogu) and *Acta Archaeologica Sinica* (Kaogu xuebao).

The institute's Web site is www.archaeology.net.cn.

and Japan, and eventually also Canada and the United States ("the Chinese Exhibition"). This initiative was designed to counter negative news generated by the excesses of the Cultural Revolution, and to make the case that the People's Republic (PRC) was a responsible member of the world community, one that respects its cultural heritage. Contemporary politics mixed with archaeology and history.

Issues of *Kaogu* (Archaeology) and *Wenwu* (Cultural Relics) were, to be sure, prefaced by the requisite "Sayings of Chairman Mao" on their fly leaf, as an imprimatur that certified political orthodoxy. Excavation reports as well as other articles, moreover, were punctuated by bold type quoting Marx, Engels, Lenin, and Stalin, as well as Mao, as a kind of Marxist commentary on their contents. Some articles were even written by the workers of a factory or soldiers of the People's Liberation Army (PLA) who had been inspired when taking part in a salvage excavation. Some issues were overwhelmed by articles on the latest political campaign—for example, "Criticize Confucius and Lin Biao" in the late 1970s, but even so there was space for reporting a new Han tomb or Neolithic cemetery. Month by month and year after year this dance played out. Gradually the political icing disappeared from the archaeological cake.

Within the Ministry of Culture and Cultural Relics Bureau, ideologues criticized the presentation of their traveling exhibition in Great Britain, where it was called "The Genius of China." The catalog featured a text by an English art historian, William Watson, who made references to such inappropriate subjects as dynastic periods and the quality of objects. When the exhibition came to the U.S. in 1975, these guardians of revolutionary truth insisted on a sanitized catalogue that applied the Marxist-Maoist framework of Primitive Society, Slave Society, and Feudal Society and eschewed anything more than the briefest captions. Even so, the "Chinese

Exhibition” was the most attended special exhibit to that date at its American venues, the National Gallery (Washington, D.C.), Nelson Gallery (Kansas City), and Asian Art Museum (San Francisco). Articles and photographs saturated much of the U.S. media. They made a deep impression on me, a graduate student at the time.

When I first went to Beijing in 1979 as part of a small team preparing a second exhibition from the PRC, “The Great Bronze Age of China,” it was still vexing for our well-meaning hosts to deal with “foreign friends.” To live in the Peking Hotel for a month, while working six days a week in the Forbidden City quarters of the Committee for Overseas Archaeological Exhibitions, was still very much to live inside the belly of the Stalinist beast. That exhibition was curated by both U.S. and Chinese scholars, with texts by the former comprising most of the catalog. To clarify “misrepresentations,” the Chinese side required inclusion of an appendix detailing their contrary interpretations of the same evidence, a fascinating critique of art historical writing.¹ This exhibition succeeded largely because of the inclusion of eight terra cotta warriors and horses from the tomb of the First Emperor of the Qin dynasty (221–206 B.C.E.), their first visit to the U.S. and a great draw for the public.

In retrospect, resumption of normal intellectual life and greater interaction with the wider world have progressed steadily since the 1970s, even with the setback of June 4, 1989. In these three decades, Chinese archaeologists have participated in one of the great ages of world archaeology, not only placing before our eyes “wonderful things” (*hao dongxi*) like terra cotta warriors, bronzes, and jades, but also, more significantly, creating new knowledge. In spite of the strains induced by the Four Modernizations in the 1980s, which made archaeological work more expensive and a career in that field much less remunerative than many others, there has been notable professionalization within the ranks of Chinese archaeologists. More and more field archaeologists are university graduates with advanced degrees. Scientific tools and methodologies—carbon-14 dating, phytoliths, GIS, DNA studies—unheard of in China in the 1970s are now widely employed. International collaboration in the field has been underway for almost a decade with Japanese, European, and American partners. And scholarship has synthesized and interpreted new data generated since 1949, on the one hand, and embraced a wide range of theoretical approaches, on the other. China has contributed a stunning list of sites to the UNESCO World Heritage program, and built new museums that rival their peers in Europe and America.

Knowledge of China pre-modern cultures has changed fundamentally from the state of the field thirty years ago. When I started graduate school in 1973, at the beginning of this golden age, data with which to investigate the early stages of Chinese culture were extremely limited

and inconsistent in quality, mostly brief reports with poor illustrations and boiler plate analysis. Today data for every topic are overwhelming in sheer quantity and much improved in general quality, and a large literature has appeared on most topics. In 1972, I could read all of every issue of the journals *Kaogu* and *Wenwu*, leaving aside Marxist-Maoist commentaries on the evils of the conspicuous consumption of a Han prince. The eighteen issues together numbered 1,231 pages. In 2001, the twenty-four issues of these same two journals totaled 2,320 pages, without political harangues. And these flagship publications, along with *Kaogu xuebao* (*Acta Archaeologica Sinica*) once effectively the whole periodical literature, are today only part of the current serials. Regional journals also demand attention, as do other publications not devoted exclusively to archaeology. Reports of excavations, both brief accounts in journals and formal monographs, are likewise only part of the picture: scholarly articles and books, collections of essays, symposium volumes, catalogues, and reference works are equally essential. Few if any libraries in China or the U.S. can actually subscribe to all these journals or keep abreast of all these publications.

Prior to 1950, Shang archaeology was limited to excavations at one complex of sites near the modern city of Anyang (Chapter 3). Between 1950 and 1966, when publications were interrupted, a handful of new finds offered clues to earlier stages of the Shang culture (the Erligang and Erlitou sites, both in Henan, Chapters 1 and 2), and to a few regional developments. But these preliminary reports, short on analysis and poorly illustrated, could not paint a very arresting picture. The second edition of K. C. Chang's *Archaeology of Ancient China* (published in 1968; see Box 4) recapitulates finds from the 1950s and 1960s. Chang's summary was still dominated by the more complete archaeological record from prewar diggings at Anyang (1928–37), then being published in journals and monographs on Taiwan.

The progress of Shang archaeology since 1972 has been enormous. Work has continued at the major Henan centers, Erlitou, Erligang, and Anyang. In each case there has been quantitative growth and qualitative improvement in data, and hence in our ability to date and interpret evidence. Formal reports for Erlitou (1999) and Zhengzhou (2001) present the bulk of the data recovered from the 1950s through the 1980s. Excavations have also embraced at least thirteen other provinces constituting the North, Northwest, and Yangzi macroregions (see Map 1). Every category of evidence, from pottery to oracle-bone inscriptions, from bronze vessels to chariots, from social-political organization to cult practices, has been enriched. We have more of the material culture at hand, and we know more about it: materials and their sources, techniques of manufacture, distribution, development, and functional contexts.

In tandem with prehistoric archaeology, the manifold discoveries of the early Bronze Age force a fundamental reinterpretation of ancient China.² Any narrative we write today must consider early, parallel developments in different macroregions and the ways those cultures interacted over time. The culture of the Late Shang period (officially c. 1300–1046 B.C.E.) was manifestly the product of such interactions. For the second millennium as a whole, we have begun to recognize several advanced Bronze Age cultures that coexisted with the literate Shang or their ancestors. Most of these developments are not represented in the accounts of traditional historiography (Box 3). The Bronze Age world of the late second millennium was more diverse and complex than traditional scholars imagined.

Box 3 Mythic Narratives

The first attempt in China to compile a comprehensive history of the world was the work by Sima Tan and his son, Sima Qian, usually called *Historical Records* (*Shi ji*). The title is better rendered as the *Grand Scribe's Records*, which more aptly registers the position of the two authors at the Han court. Started by the father and completed by the son, by then disgraced and punished by castration, this work synthesizes sources then current (c. 100 B.C.E.) for the history of the earliest dynasties, the rise of Qin, and the early reigns of (Western) Han. The text begins with annals of the “Five Emperors” (*Wu di*), and continues with the Xia, Shang, and Zhou—the “Three Dynasties” (*San dai*)—followed by Qin and Han. Presented with these annals were chronological tables, monographs on major topics (rites, calendar, sacrifices), accounts of hereditary houses, and extensive biographies.

Sima Qian collected his material from a variety of sources, only some of which survive today. He was much influenced by the orthodoxy of his day, such as veneration for the newly ordained classics of history and poetry (*Shu jing*, *Shi jing*). He was also careful to provide an account of the legitimate transmission of heaven's mandate from antiquity to the current rulers, the Han. Each dynasty is fitted out with a genealogy that links its ancestors and founder to the sages of antiquity. Each is also implicitly evaluated for its moral worth through details of the successes of its virtuous founder and the failings of its last ruler. In this schematic telling, the founding of a dynasty takes place with heaven's approbation, and the demise of its last ruler likewise has heaven's consent. Moreover, even the



Figure P.1. "Three Sovereigns" rubbing from the Wu family shrines, Jiaxiang, Shandong, second century C.E. Wu Hung, *The Wu Liang Shrine: The Ideology of Early Chinese Pictorial Art* (Stanford, Calif.: Stanford University Press, 1989), p. 157. Mytho-history begins with the "Three Sovereigns," from right to left, Fu Xi with Nu Wa, the progenitors of the human species, Zhu Rong, and Shen Nong (the Divine Farmer), the progenitor of agriculture, shown here with a spade. The same texts that inspired these depictions narrate the "histories" of the Three Dynasties: Xia, Shang, and Zhou.

earliest dynasties are imagined as similar in their institutions and customs to the more recent Zhou and Han ages, with their bureaucratic court cultures.

Many materials from the annals of the Five Emperors and Three Dynasties are now regarded as myth. As we will see in extracts cited in the following chapters, ancestral figures have unusual conceptions, remarkable talents at a precocious age, and perform heroic acts that defy the norms of the world of ordinary mortals. Only a few of Sima Qian's sources for these myths can be read today, notably several poems of *Shi jing* and such compilations as *Shan hai jing*, *Lü shi chunqiu*, and the "Heavenly Questions" of *Chu ci*. After Sima Qian's time, many of these myths were further elaborated, and some became the stuff of pictorial renderings (Fig. P.1). In a family shrine from the mid-second century C.E., for example, we find a display of culture heroes beginning with the "Three Sovereigns" (*san huang*) and followed by the illustrious founders of the Three Dynasties.

In this book, I attempt to synthesize these recent excavations: to pull the evidence together and to create a tentative framework for this formative age in East Asia. New brief reports have appeared in the months I have been writing, and formal reports of that work will not appear, at best, for several years. Yet the data at hand are certainly sufficient to stimulate further studies. I have written for an audience drawn to the topic by their interest, without assuming any prior familiarity on their part with Chinese studies or archaeology. I draw on all sources now available, most of all Chinese archaeological reports, as well as secondary scholarship in Chinese and English, including the writings of epigraphers, historians, and art historians. The resulting chapters are not the same as the renditions of scholars whose primary focus is inscriptions or bronze casting, but I have tried to learn from other specialists and to acknowledge my debts to them.³ References to excavation reports and other sources, almost entirely Chinese-language publications, will be found in the notes. Suggestions for additional reading provide entrée into English-language scholarship, although it generally lags behind efforts in China.

This volume surveys the early Bronze Age in parts of modern-day China, from the Erlitou Culture to the end of dynastic Shang (officially, c. 2070–1046 B.C.E.). Both my selection of topics and their coverage are driven by what archaeologists have accomplished and had an opportunity to digest. I have studied many of these topics myself for about thirty years, both as a university teacher and a writer. I have also had the privilege of participating (1997–99) in a Sino-American survey of the Anyang region that has yielded unexpected results (see Box 13). This experience, and many trips to China most years since 1979, have given me the chance to meet Chinese colleagues, to see their sites and collections, and to exchange ideas both at formal gatherings and numerous informal encounters. This book is the product most of all of the hard work and intelligence of several generations of Chinese archaeologists.

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Introduction

Early Bronze Age societies grew from deep roots in several regions of modern-day China. Before embarking on our survey of those developments, we should review both the physical setting and cultural developments at the beginning of this new age.

Geographical Setting: Macroregions

Most readers carry in their heads an icon of China derived from contemporary maps. This mental picture represents the greater part of East Asia, from Manchuria to Hainan Island and from coastal cities to Central Asian deserts. An expansive map of China—now the territory of the PRC—is an aberration in the context of Chinese history. This map dates only from the late eighteenth century, when the Manchu Qing dynasty (1644–1911) expanded its borders to include territories inhabited by Mongols, Central Asian Turkish speakers, and Tibetans. The Manchu empire was demonstrably the largest state in the world in its day, certainly the most populous, and arguably the most powerful. Its great sovereign, the Qianlong emperor (Hongli, r. 1735–96), could look with some disdain on European envoys like Lord Macartney who arrived at his capital in hopes of securing diplomatic and trade relations. Never before had China dominated so much of East Asia. Qianlong's empire, shorn only of "Outer" Mongolia, became the map of China in the twentieth century, and hence that of the PRC.

The modern map represents a state of vast dimensions, the second largest country in area (after Russia) at 3.7 million square miles (9.3 million sq km). (The United States is slightly smaller at 3.6 million sq mi.) Topographical and climatic diversity are extreme: from subarctic terrain in Heilongjiang at the latitude of Hudson's Bay, Canada, to tropical forests in Guangxi at the latitude of Havana, Cuba, from the world's highest plateau in Tibet, to the coastal lowlands of Guangdong. Divided into provinces (now twenty-two, plus Taiwan), autonomous regions (five),

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and centrally-administered cities (four), the PRC has a total population in excess of 1.2 billion. Many modern Chinese provinces are comparable in area and population to the largest, most populous European nations. Henan, for example, is 167,000 sq km in area with a population estimated (in 1997) at 93.9 million. This population—one in five humans living on earth—comprises one of the world's most diverse states, with fifty-five recognized national minorities (*shaoshu minzu*, 9 percent of the population) in addition to the “Han” (notionally Chinese) majority. This China, with its vast territories and staggering population, did not exist in the second millennium B.C.E. when our story takes place. Nor should we assign our story the status of a creation epic for the PRC and its many peoples. Rather, in this book our story transpires in portions of the modern map, and involves a fraction of the diversity in environment and human groups noted above.

To analyze the great bulk of modern China, we must first isolate core from periphery. For our purposes, the core (also called Inner China, Agrarian China, or China Proper) can be defined as about half the area of the PRC, territory east of a diagonal running from southern Manchuria in the northeast to western Yunnan in the southwest. Cleaving the map here, we pare off most of Manchuria, and all of Mongolia, Xinjiang, and the Qinghai-Tibetan plateau (regions sometimes collectively called Outer China). There are several rationales for making this split: (1) these territories were, with few exceptions, worlds apart from Chinese history until the Ming and Qing periods; (2) each region exhibits strong contrasts in terrain, climate, subsistence, and indigenous populations when compared to the core; (3) until recently, only about 5 percent of the PRC's population lived in these regions, compared to 95 percent in the roughly equal area of the core. This periphery figures only to a very limited degree in our story of the early Bronze Age. With such exceptions as the transmission of the horse-drawn chariot from points west, the Shang and their contemporaries had little to do with most cultures of the periphery as defined here.

What remains as the core is still, however, more territory than we will engage in our story. The tectonics, the underlying physical structures of the earth, of China Proper divide its terrain into a series of stepped zones decreasing in elevation like terraces from west to east. The western highlands of China Proper, both north and south, are intermediate in altitude (at 1000–2000 m) between the extremely high plateaus of Tibet and Qinghai (about 4000 m), on the one hand, and much lower areas stretching east to the coast (at less than 50 m). Both the Erlitou and Erligang archaeological cultures developed in the transitional zone between the middle terrace and the lower, eastern plains. Further shaping

the terrain of China Proper are east-west trending mountain chains, extensions of even higher ranges of Outer China. Separating North China from the Mongolian steppe (and periphery) are the Yanshan Mountains, north of modern Beijing. Running across the midriff of China Proper is the Qinling range that, in the west, separates the Wei River drainage of modern Shaanxi from the Sichuan basin. Its eastern extensions separate north and south through the center. Finally, north of the Guangdong-Guangxi basin run the Nanling Mountains. These major east-west ranges do not account for all mountainous terrain. A series of upfolds (anticlines) running northeast to southwest cross both the stepped terraces and east-west ranges described above. For example, a single fold erupts as mountains on the Korean peninsula and reappears as the coastal mountains of Fujian. Another fold created the Taihang Mountains that separate North China lowlands from the northwest loess highlands. Further south, this fold demarcates the Upper Yangzi from the Middle Yangzi, as the setting for the Yangzi Gorges. As a consequence of these overlaid tectonic structures, about 33 percent of China Proper is mountainous, 26 percent plateaus, 19 percent basins, 12 percent plains, and 10 percent low hill country. Arable, flat terrain is generally at a premium.

Two great river systems cross this checkerboard of tectonic features. In the north, the Yellow River (Huang he) arises on the Qinghai-Tibetan plateau, and flows generally east and north to create a great loop around the Ordos desert. It then flows south between north-south mountains before turning left about 90 degrees to come down from the second terrace onto the eastern plains and debouch in the Yellow Sea. Like the Yangzi River in central China, the Yellow River links the highest terraces of Outer China to coastal areas of the core, but it is not navigable for much of that course. Its great bend was, however, a conduit for human communication from the western margins of the North China plain (Luoyang and Zhengzhou) to the Wei River valley (modern Xi'an). The path of this great river across the plain changed many times in prehistory and in historic times. Its modern course, northeast of the Taishan massif of Shandong, is only one of several routes, albeit close to the path it followed during Shang times. The appellation "yellow" derives from the immense burden of silt (loess) this river carries, currently estimated at 1.6 billion tons per year. Its waters consequently are much like a slurry or soup.

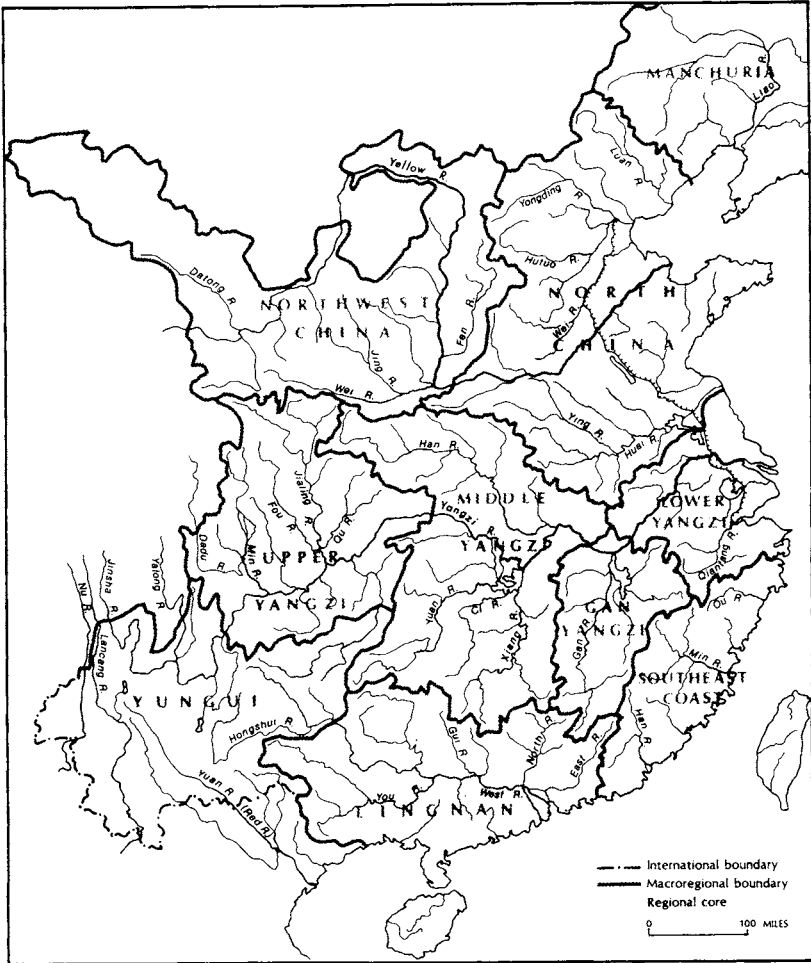
The other great river system, the Yangzi or Changjiang (the "winding" or "long" river), also arises in the high plateaus of the west, cuts its path southward through highlands in parallel with other great rivers of Southeast Asia (the Mekong and Salween) before entering the Sichuan

4 Introduction

basin from the south. The Yangzi crosses this intermediate terrace before cutting through its eastern flanks, in modern Chongqing and Hubei (the Three Gorges). Once free, the Yangzi then meanders across low-lying country from the lakelands of Hubei-Hunan into the Lower Yangzi delta below Nanjing. The river and its tributaries feed two great lakes: Lake Dongting in modern Hunan ("south of the lake"), once known as Lake Yunmeng and a natural catchment basin for all of central China, and Lake Boyang of modern Jiangxi. Unlike the Yellow, the Yangzi River is navigable for great distances east and west, and serves today as an essential transportation corridor. Its volume of water is far greater than the Yellow, and its broad channel was a major impediment to north-south communication until recent times.

The worlds of these two great river systems are markedly different. The Yellow River drainage has a climate of four distinct seasons, cold winters, some snowfall, with most precipitation in the hottest months of summer. It is relatively arid; dry field agriculture predominates. Nowadays two crops per year are generally expected, with harvests in May-June and September-October. Deciduous and conifer forests once covered foothills and mountains of the North, but serious deforestation has taken place over time. The natural fauna and flora are those of temperate zones. By contrast, the Yangzi River drainage is a climatic zone without harsh winter weather, some frost notwithstanding, and regular monsoonal rainfall in the summer months. It is a humid environment, with extensive areas of marsh lands, numerous lakes and rivers, and paddy rice agriculture predominant. Three crops per year are possible. Forest cover cloaks the many uplands and mountains, although here too deforestation has been an accelerating problem. Natural fauna and flora are subtropical, even tropical. The civilization of the early Bronze Age took shape within both climatic regimes.

The relief map of Inner China, subdivided by mountain chains and linked by its great rivers, can best be understood in terms of physiographic units called macroregions (Map 1). The scheme of regions used here is derived from the work of G. W. Skinner, whose focus was the economic structure of the late empire, especially Qing markets and urbanization. Nonetheless, Skinner's insights are extremely useful for an analysis of the Bronze Age and even earlier periods precisely because, unlike modern provinces or their premodern antecedents, a macroregion is a natural physiographic unit. Each macroregion centers on an internal river system (its core), where the most arable land and best water resources are found. Each region is circumscribed, in turn, by natural barriers (its periphery), mainly mountain ranges that determine internal drainage. Mountains are never absolute barriers to human movement, but they do create incentives for human groups to cluster within a region



Map 1. China: macroregions. William G. Skinner, "The Structure of Chinese History," *Journal of Asian Studies* 44, 2 (February 1985): 273.

and to interact along its internal river system. Macroregions are in most cases comparable to or even larger than the area, natural resources, and populations of states in other parts of the globe. These regions were in fact the building blocks of that historical creation we call "China." Recognizing them at the outset, in our discussion of the late prehistoric interaction sphere (see Map 3), and keeping them in focus throughout our investigation, will sharpen our appreciation of this historical process.

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The macroregions can be grouped by latitude into three bands: north, center, and south. The North China macroregion occupies the eastern half of China Proper in the north, largely the lower drainage of the Yellow River. Its northern boundary, the Yanshan range, is close to the traditional line of the Great Wall of China, running from the sea coast to the interior. A fairly sharp demarcation of terrain and cultures differentiates the North China plain and the grassland steppes of Inner Mongolia. Its western boundary is the Taihang range trending generally northeast-southwest, approximating the modern border of Hebei and Shanxi provinces. The Yellow River enters the North China Plain near the southern end of this range through Sanmen Gorge. Its southern boundary comprises low mountains extending east from the Qinling range to the Huai River, which itself constitutes the drainage for the southern plains. The Huang-Huai drainage surrounds the Shandong massif, and extends along the coast from the Great Wall to northern Jiangsu. The largest concentration of early Bronze Age sites will be found in this macroregion, many distributed around the central holy mountain, Mount Song.

The western half of northern China is the Northwest macroregion. Here “natural” limits are in the eye of the beholder. Its eastern boundary with the North China macroregion has already been defined, and the high loess lands that extend westward from the Taihang are a major feature of this region. Its southern boundary is also the Qinling range, running east-west and defining the southern limits of the Wei River drainage. This basin, along with the middle reaches of the Yellow (dividing modern Shanxi and Shaanxi provinces) and the drainage of the Fen River (the drainage of modern Shanxi), constitute the macroregional core. The challenge for this macroregion is establishing its putative northern and western limits. Both could be defined as the mountains that overlook the Wei River on the north, a narrow construction. Taking a wider view, the region includes much of the Gansu corridor trending northwest, as well as the northern and western margins of the Yellow River as it arcs around the Ordos desert. However its regional limits are defined, this is the land of loess, an aeolian, fine particle soil brought into the region by wind since the retreat of the last Ice Age glaciers. Much loess has, in turn, been redeposited in the North China macroregion by river flows (hence the Yellow River), so that it is characteristic of the North China Plain as well.

The middle band of macroregions is no less than the Yangzi River system, subdivided into Upper, Middle, and Lower segments. Here too some choices must be imposed on an ostensible natural order. The Upper Yangzi macroregion consists of the Sichuan basin, more or less the modern province of that name, delimited by the Qinling on the north,

the Three Gorges on the east, and other mountain chains on south and west. The regional core comprises the basins of the traditional “four rivers” (*si chuan*), including the Yangzi, Jialing, Min, and Wu. The Middle Yangzi macroregion is the lake country of modern Hubei and Hunan provinces, including major tributaries that flow into the lakes from north (the Han River) and south (the Xiang River). One can also include the Gan River drainage of modern Jiangxi province flowing into Lake Boyang. (The latter can also be defined as its own macroregion, since it too is a drainage within an encircling mountain boundary.) The Lower Yangzi macroregion is somewhat hard to delimit on the north, but the combined Lower Yangzi drainage and Qiantang River drainage (Zhejiang province) offer a practical definition. Both the Upper and Middle Yangzi (including Gan River) macroregions now supply important archaeological evidence for the early Bronze Age.

The southern band of macroregions figure not at all in our discussions. The Southeast Coast macroregion, the Lingnan (or Far South) macroregion, and the Yungui (or Southwest) macroregion are effectively excluded by the lack, to date, of significant evidence for the early Bronze Age. The penetration of these regions by peoples from the North began in earnest in the Qin period, the late third century B.C.E., and gradually increased over the early and middle empires (Han and Tang). Han-Chinese populations pushed local groups out of regional cores, a process that accelerated finally in Ming and Qing times. A high percentage of the modern “national minorities” are indigenous inhabitants of these southern macroregions.

Contact between these macroregions can be identified in the archaeological record from the late Neolithic period (c. 5000–2000 B.C.E.). Low mountains and valley streams permitted communication between North China and the Middle and Lower Yangzi macroregions, respectively. River valleys and steeper paths connected the Northwest and Upper Yangzi macroregions, so the channels for communication were perhaps more restricted. East-west communication also utilized the great river valleys, although until modern times the transit from Middle to Upper Yangzi was especially arduous. Moreover, none of the outer limits of these same macroregions excluded contacts with neighboring peoples, although their peripheries do represent the effective limit of the ethnic-Han population in early times.

Cultural Setting: The Longshan Age

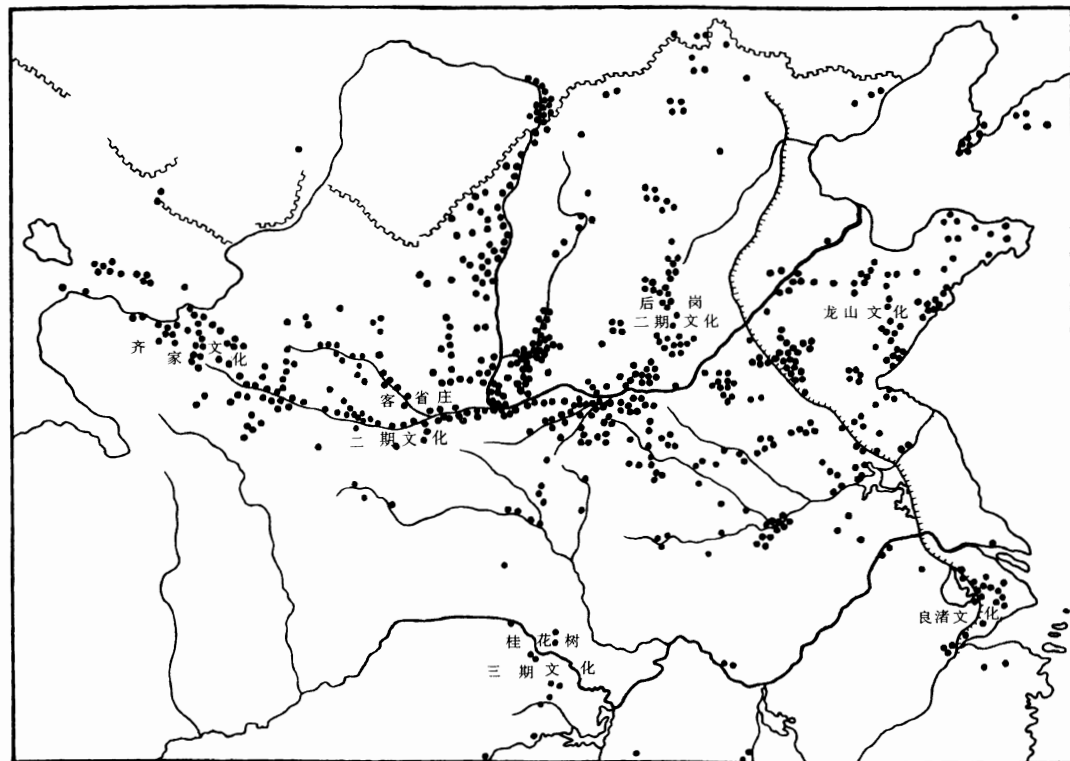
The sources of the early Bronze Age cultures of the northern and central macroregions are to be found in the third millennium B.C.E. This period has been commonly referred to, rather redundantly, as the late

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phase of the late Neolithic, or Terminal Neolithic (*xin shiqi shidai moqi*), Chalcolithic Age (*tong shi bingyong qi*), or even as the Age of Jade (*yuqi shidai*). It is not surprising that several competing terms are in play. Each term foregrounds its own logic. The Neolithic as a whole is now dated c. 10,000–2000 B.C.E., with the late period starting c. 5000 B.C.E. The use of “terminal,” which we adopt, has the virtue of defining more narrowly a discrete final portion of this very lengthy period. While metals, both copper and bronze, are known from a variety Neolithic sites, especially in the Northwest, it would be an overstatement to characterize the millennium as an age when metals were of considerable significance in these societies. And to characterize this whole period as an “Age of Jade” seems misleading on similar grounds. Regional cultures show different propensities toward the use of hardstones, including true jades. Only a few, like the Lower Yangzi Liangzhu Culture, exploited them to a marked degree.

Traits invoked in conventional definitions of the term “civilization” are characteristic of many Terminal Neolithic societies.¹ Populations grew, and higher agricultural production is commonly assumed. Increased production depended on opening new fields and quite possibly on better organized labor. Settlements increased in real numbers, in their scale, and in the complexity of regional distribution patterns. In some areas, two or three hierarchical levels are indicated by survey data. In such regions, large centers had relationships with smaller outlying settlements as well as dispersed farming hamlets. Many regional centers were walled—especially in the middle and lower reaches of the Yellow River (North China) and Middle Yangzi macroregion. Walls and some structures within them show use of the rammed earth (*hangtu*) process associated with Bronze Age architecture (see Box 8). Burials at these sites, moreover, show evidence for social stratification: a small number of richly furnished, large graves contrast to less well furnished medium and small burials. Prestige goods—finely crafted pottery and hardstones, in particular—also figure prominently in the archaeological record. Some use of metals is attested, as well as evidence for signs or graphs, perhaps early writing. All of these traits of sites and artifacts, recoverable through archaeological techniques, indicate in the aggregate the development of ranked societies with elites in centers exercising power over regions. Some of these societies may be classed as chiefdoms or even incipient states.

Chinese scholars now refer to archaeological cultures of the Terminal Neolithic as the “Longshan Age” (Map 2).² The place name Longshan derives from a district in Zhangqiu County, Shandong province, where archaeologists investigated the Chengziyai site in 1930–31. Chengziyai was first discovered by a Shandong native, Wu Jinding (G. D. Wu), who



Map 2. Distribution of Longshan Age sites. Yan, "Longshan wenhua he shidai," in *Shiqian kaogu lunji* (1998), p. 27.

recognized stone celts and pottery sherds he found exposed in a road cut. When dangerous local conditions made excavations at Anyang, Henan, impossible (Chapter 3), the excavation team assembled by Academia Sinica moved to Chengzhiyai. There they unearthed portions of a large walled compound, and recovered abundant black pottery, including so-called eggshell wares. This evidence was interpreted at the time as a Neolithic tradition parallel to the then better-known Yangshao Culture “painted pottery” of Henan and Gansu. The Black Pottery or Longshan Culture was found subsequently at many sites surrounding the Taishan massif, south of the Yellow River. Liang Siyong, working at the Hougang mound near Anyang, recognized what he called a “triple stratigraphy”: Longshan sherds above Yangshao ones, but below Shang remains. Longshan black wares thereafter were understood either as a separate cultural tradition (the two cultures theory) or as a tradition flowing from the earlier Yangshao Culture.

The postwar decade saw numerous archaeological surveys, so that by 1959 Neolithic cultures had been recognized in several macroregions. The Miaodigou site near Sanmenxia, in western Henan south of the Yellow River, and the neighboring Sanliqiao site across a ravine, inspired An Zhimin to posit a developmental sequence from late Yangshao to early Longshan (called the Miaodigou II Culture). Yangshao painted pottery then became diagnostic of the early Neolithic, while Longshan black pottery was characteristic of late Neolithic sites. Cultures comparable in development to the Shandong Longshan were identified in parts of Henan, Shaanxi, and the Lower and Middle Yangzi. Thus was born the “Nuclear theory.” In brief, this proposed: (1) the Yangshao Culture gave way to Longshan in the Yellow River heartland of Henan-Shaanxi-Shanxi, (2) developments across a wider area reflected a subsequent expansion from that nuclear area. Defining a “Lungshanoid horizon” was an early contribution of Kwang-chih Chang in his influential *Archaeology of Ancient China*, first edition 1963 (Box 4). Chang’s list of horizon traits was persuasive but at the time could not be anchored in an absolute chronology.

The publication of radiocarbon datings in the early 1970s turned this evidence on its head. Carbon datings demonstrated the antiquity of many regional cultures outside the Nuclear Area, cultures that had been assumed to be later in time than the former. The supposed primacy of the nuclear area thus vanished. Instead, it became increasingly obvious, for example in Chang’s third (1977) and fourth editions (1986), that other regions had their own lengthy developmental histories prior to the Lungshanoid horizon. Expansion from a heartland center would no longer fully explain these regional developments and the resulting horizon. To rationalize these data, Chang proposed a model from North

Box 4 K. C. Chang

Among scholars outside China, no one in the twentieth century had as much impact on the development of Chinese archaeology as Kwang-chih Chang (1931–2001; Fig. 0.1). Born in Beijing and first educated there, Guangzhi Zhang moved to Taiwan, where he attended National Taiwan University. His teachers were the original excavators from Anyang, especially Li Ji (see Box 11). Chang was able to pursue graduate studies at Harvard, where he took his Ph.D. in 1960 with a “library” dissertation on Chinese settlement archaeology. Chang trained as an anthropological archaeologist as American archaeology was reinventing itself (the “new archaeology”), both through greater reliance on scientific methods and greater attention to theory. He entered the field as the first harvest of post-1949 fieldwork was reaching print.

Chang’s first notable achievement was *The Archaeology of Ancient*



Figure 0.1. K. C. Chang (right) at Shangqiu, Henan. R. Murowchick, “State of Sino-Foreign Collaborative Archaeology,” *Orientalis* 28, 6 (1997): 26.

China (in four editions: 1963, 1968, 1977, 1986). This volume was far more than a catalogue of recent discoveries draped over a chronological frame. Chang's interest in settlement archaeology and anthropological theory allowed him to synthesize the ever-expanding data, and to fashion a working hypothesis for the growth of prehistoric cultures, his "Lungshanoid" horizon. But Chang was also deeply committed to the Bronze Age, studying ritual vessels with a computerized database, researching Shang and Zhou myths, rethinking the Shang and Zhou royal lineages, investigating the anthropology of food, urban settlement patterns, and the role of art and ritual in the formation of early Chinese states. These interests yielded *Early Chinese Civilization: Anthropological Perspectives* (1976), *Food in Chinese Culture: Anthropological and Historical Perspectives* (1977), *Shang Civilization* (1980), and *Art, Myth, and Ritual: The Path to Political Authority in Ancient China* (1983), as well as a constant stream of journal articles in both Chinese and English.

Although he first gained field experience in Taiwan and France, Chang's ability to excavate in China was frustrated by the politics of the Cold War era. In the 1990s, under the flag of the Institute of Archaeology, Beijing, and Harvard's Peabody Museum, Chang was able to initiate an "Early Shang Civilization" project in eastern Henan. The target of this effort was the region of Shangqiu, which Chang and others associate with the "great city Shang," perhaps the original ritual center of the Shang people. Deeply covered with alluvial sediments from the Yellow River, survey in this area required a rigorous program of geophysical prospecting to locate ancient habitation sites many meters below ground level. Among the finds already announced by this project are walls of the ancient capital of Song, the Zhou-era state that succeeded the Shang and according to tradition continued its sacrifices.

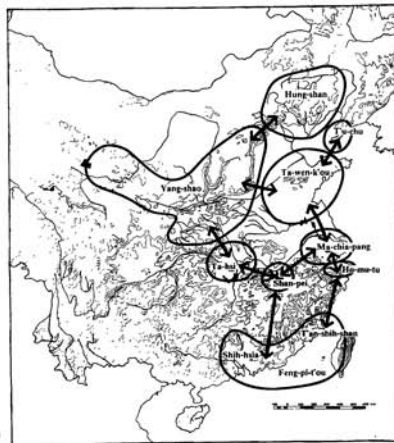
American archaeology: interaction spheres. In this model, regional cultures literally grew together as their populations expanded over the landscape (Map 3). Movements of people and goods, with consequent effects at both ends, became ever more frequent. Neighboring cultures thus came to exhibit common traits (seen as the horizon). The map of China thus became a collection of geographically circumscribed regions with cultures that interacted. Common traits still warrant the label Longshan for these regional cultures and this period. The term now does not signify the culture of Shandong or origins from Shandong, but



(a)



(b)



(c)

Map 3. Kwang-chih Chang's "Chinese Interaction Sphere": (a) cultures ca. 7000 B.C.E.; (b) cultures ca. 5000; (c) cultures ca. 4000/3000. Chang, *The Archaeology of Ancient China*, 4th ed. (New Haven, Conn.: Yale University Press, 1986), p. 235.

rather than a culture exhibiting many of these traits was first identified there. In considering sources for the early Bronze Age, the Longshan Age cultures of Shandong (Classic Longshan), Henan, Shanxi (Taosi), Hubei (Shijiahe), and Zhejiang-Jiangsu (Liangzhu) now play key roles (compare Map 4).

From the 1950s through the 1970s, regional settlement surveys had been neglected in China. Pedestrian surveys ordered in each province

by the Cultural Relics Bureau did document the distribution of sites along the dendritic patterns of river drainages. Survey practice, however, limited description of these sites to broad statements about their area and rough-and-ready estimates of their cultural components. Both kinds of data were derived from surface collections, often utilizing road cuts and other existing exposures. Only in recent decades have more thorough excavations of habitation sites become more common, while in the last decade, systematic regional surveys, several with international collaborators, have begun to focus on settlement patterns.³ While most of these projects have not yet published their formal reports, the theory and practice of Chinese archaeology have changed in important ways as they have unfolded. Settlement archaeology has become one of the main foci of Neolithic research in China.

The most startling revelation derived from new fieldwork regimens has been discovery of fifty or more walled sites across several macroregions. These finds now represent eight or more archaeological cultures of the Terminal Neolithic. Much of this data has been published in newspapers or yearbooks, and only a fraction have appeared as preliminary reports in archaeological journals. My account is derived from an overview written by Ren Shinan, then director of the Institute of Archaeology (Beijing), published in early 1998.⁴ When Ren wrote, he had summary data for sites in the Middle Yellow River (Henan), the Lower Yellow River (Shandong), the Middle Yangzi (Hubei and Hunan) macroregion, and the Upper Yangzi macroregion (Sichuan). He also had some evidence for the Lower Yangzi and the Yanshan zone across the north. I have supplemented his account with data from more recent publications.

Ren's article provides an estimate of the area of each site (see Table 0.1). The largest is the Shijiahe site cluster in Tianmen County, Hubei (at 1,200,000 sq m; 120 hectares) in the Middle Yangzi. Baoduncheng in Xinjin, Sichuan (the Upper Yangzi) is next largest at 600,000 sq m (60 hectares). A middle-size range between about 35 and 15 hectares accounts for the greatest number of sites: now at least eleven spread across all regions. A small-size range, from 15 down to as little as one hectare, also spans the regions with eight examples. Ren Shinan isolated several general contrasts between the northern (Henan and Shandong) sites and those along the Yangzi. In the north, walled sites were constructed on level terrain, although elevated positions near terraces were sometimes selected to create what Shandong archaeologists call "terrace cities" (*tai cheng*). Along the Yangzi, on the other hand, natural hills and ridges higher than surrounding terrain were tied together to create walls. For these reasons, northern sites tend to have regular square or rectangular footprints, while Yangzi sites are more irregular. In the

TABLE 0.1. Longshan Age Walled Sites

<i>Region</i>	<i>Site</i>	<i>Area</i> (hectares)	<i>Dimensions</i> (NS × EW)	<i>Source</i>
<i>North</i>				
Henan	Pingliangtai	5	185 × 185	WW 83.3
	Wangchenggang	1	NS 92	Wangchenggang
	Mengzhuang	16	375 × 340	KG 00.3
	Haojiatai	3.3		
Shandong	Xikangliu	3.5	195 × 185	KG 95.3
	Chengziyai	20	530 × 430	Top 100
	Dinggong	16	350 × 310	KG 93.4
	Bianxianwang	5.7	240 × 240	
	Tianwang	15		
	Youlou	2.5	150 × 170	
	Jingyanggang	38	1150 × 400	KG 97.5
	Jiaochangpu	40	1100 × 360	
Shanxi	Taosi	270	1800 × 1500	TX 5 (2003)
<i>Middle Yangzi</i>				
	Shijiahe	120	1200 × 1100	WW 90.8, 94.4
	Chengtoushan	7.6	Diameter: 325	WW 93.12
	Mingjicheng		500 × 400	
	Yinxiangcheng	12	350 × 580?	KG 97.5, 98.1
	Zoumaling	7.8	300 × 370	
	Majiawan	24	250/440 × 640/740	WW 97.7
<i>Lower Yangzi</i>				
	Mojiaoshan	30	450 × 670	WW 01.12
<i>Upper Yangzi</i>				
	Baoduncheng	60	1000 × 600	KG 97.1, 98.1
	Yufucheng	32		WW 98.12
	Pixian gucheng	32.5	650 × 500	WW 99.1
	Mangcheng	12	360 × 340	KG 99.7

Sources: Ren Shinan, "Zhongguo shiqian cheng zhi kaocha" [Examination of walled sites in prehistoric China], *Kaogu* 1998. 1:1–16; Zhang Xuehai, "Shilun Shandong dichu de Longshan wenhua cheng" [Preliminary discussion of Longshan Culture walled sites in the Shandong region], *Wenwu* 1996.12:40–52.

north a trench or footing for the wall was generally excavated first, then refilled with pounded earth as the wall was built to its full height. Forms were used to hold loose soil as it was compacted. In the south, sticky mud was mounded up and then pounded hard on exterior faces; forms were not used. Both areas have walls with moats, but in the south moats are generally wider and deeper, and they sometimes connect with the interior.

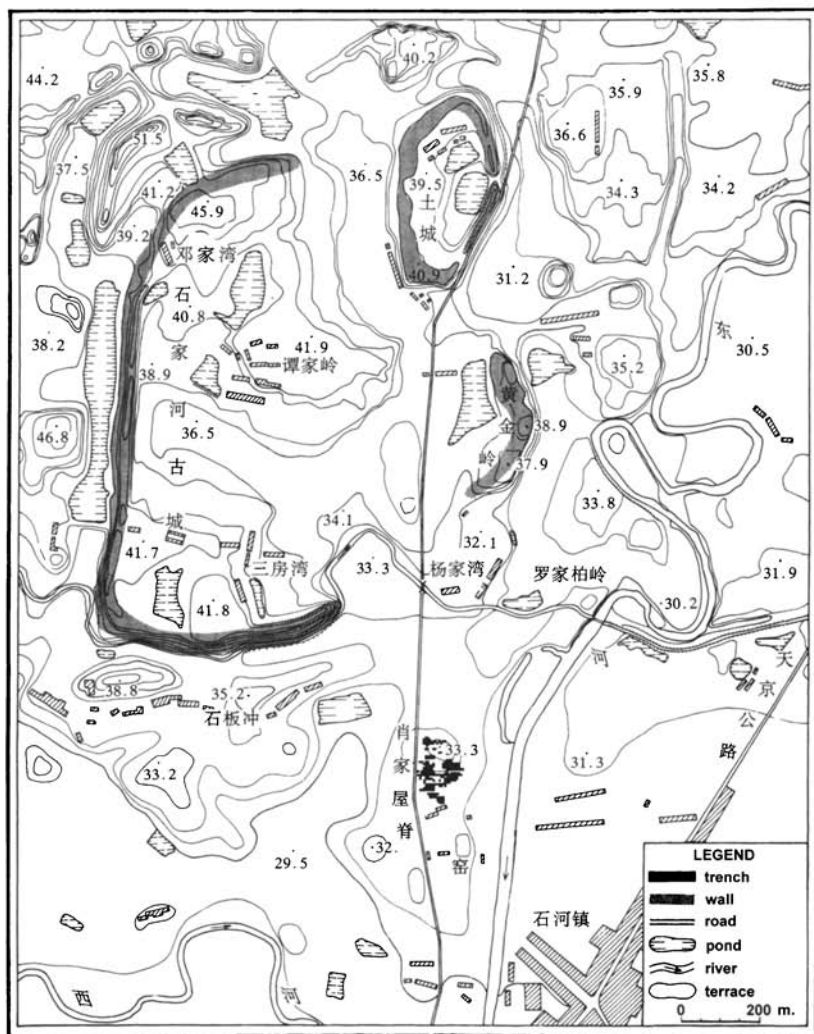


Figure 0.2. Walls at Shijiahe, Tianmen, Hubei. *Xiaojiawuji* (1999), p. 3.

Two examples will represent these varied walled sites. At Shijiahe, Hubei, about 2,000 m of wall still stands above ground level, roughly 6 m high, with base dimensions of as much as 50 m and widths at top of 8–10 m (Fig. 0.2). The moat surrounding this wall is 80–100 m wide, and seems to be a mix of natural channels and human effort. The enclosed area is about 1,200 m north-south by a maximum of 1,100 m east-west.

At least thirty sites of the period have been located within a surrounding area of 8 sq km. This is the largest walled site of the Terminal Neolithic (but see below) and is plausibly interpreted as a major regional center of the Middle Yangzi macroregion. Other Middle Yangzi walled sites are significantly smaller, and surveys have yet to establish regional settlement patterns that would determine their status or relations. In the Chengdu basin, however, recent work has established a network of some half dozen walled sites that predate the appearance of the Bronze Age Sanxingdui Culture (see Chapter 5).

In Henan, settlement pattern data are still unavailable for regions with walled sites. At Mengzhuang, in northern Henan, ancient walls had been leveled by local farmers in recent decades. Their footprint is a square about 375 m north-south by 340 m east-west; the excavators believe it may originally have been about 400 m on each side. Forms were used to hold the soil dug from both sides of the walls as it was pounded hard. The borrow trench outside then served as a moat, and was itself 20 m wide and 5–6 m deep. An opening in the east wall may have been a gate. House foundations, pits, and four fresh water wells have been plotted within the walls. The Mengzhuang site is the largest site presently known in the “central plains.” Its occupation seems to have spanned the Longshan Age, Erlitou Culture, and Erligang Culture.

Taosi, a Longshan Age culture based in the Fen River basin of Shanxi province, is another candidate for a complex society at or near a state level.⁵ The type site first gained attention because of its extensive cemetery (with 1,300 graves excavated, perhaps a sixth of the total) and the pronounced disparity in the size and furnishings of graves. Excavations resumed in 1999 with a twin focus on architectural foundations and traces of several walls. These excavations have been reported only in brief notices, but have progressed far enough that one can now speak of the largest pre-Bronze Age walled site in all of China. The estimated area within the walls is some 2,700,000 sq m (270 hectares), about half the total site. The cemetery tracts known from the 1980s are now seen as early period, extramural features. The walls themselves are mostly dated to the middle period, and were damaged in part by the late period. Within the walls were smaller walled areas, some with elite houses and burials (Figure 0.3) and others with sacrificial tracts. The story of the Taosi site is still unfolding, but the complexity of its features suggests a society and regional polity that would have rivaled the later Erlitou Culture on its southeastern horizon.

The better known Chengzhiyai site has also been reexcavated in recent years. Although a proper report has yet to appear, we now know this site was occupied from the Longshan Age into the time of Erlitou (known locally as the Yueshi Culture). Moreover, Chengzhiyai was a large center

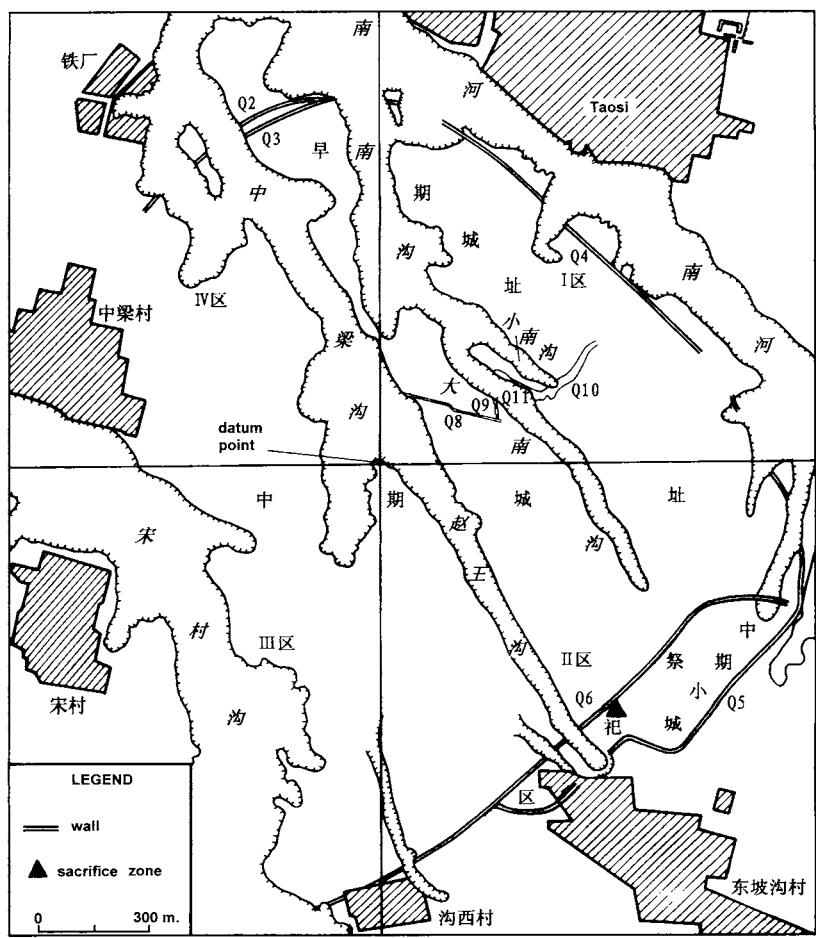


Figure 0.3. Walls at Taosi site, Xiangfen, Shanxi. *Kaogu* 2004.7:10.

in a region with a number of smaller satellite communities (Figure 0.4). Systematic regional survey by an international team is now beginning to report similar results in other parts of Shandong. Contrary to authoritative accounts of just a few years ago, we now envision the Longshan Age, both north and south, as a period when a substantial number of walled sites dotted the landscape. Some walled sites were the hub of settlement clusters (as at Shijiahe and Chengziyai), while others might have been middle-level centers (Mengzhuang?). Still other sites probably served more narrowly defined purposes, perhaps to control resources.

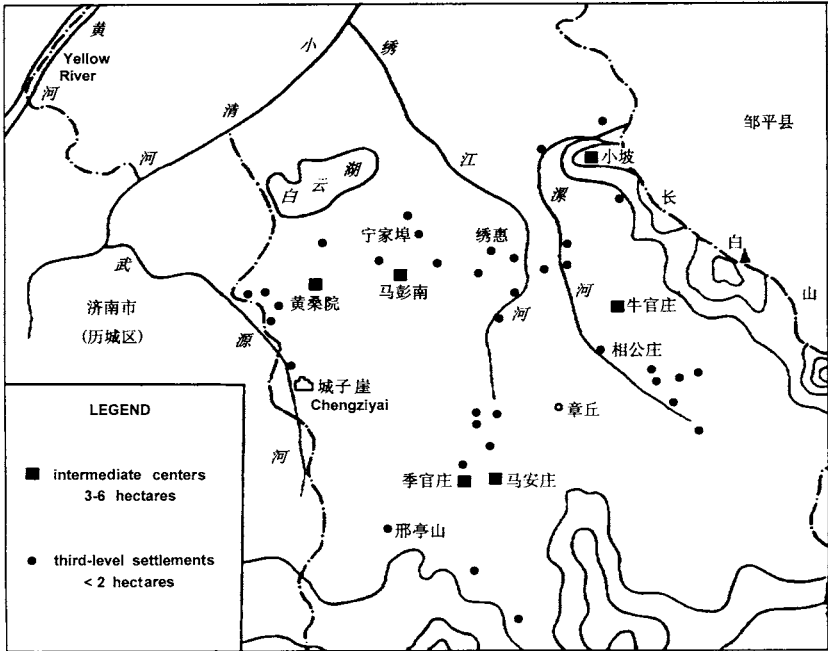


Figure 0.4. Settlement distribution near Chengziyai, Shandong. *Kaogu* 1998.1:3. This regional map, an area about 20 km square, shows Chengziyai and an array of forty intermediate and third level settlements nearby. The Yellow River cuts across the map at top left; higher land extends southward. Most of the third level settlements are situated near tributaries that flow north toward the Yellow River; these small settlements are generally less than 2 hectares in area. The six intermediate level centers have areas estimated at 3-6 hectares. Chengziyai flourished from c. 2600 B.C.E. into the Yueshi Culture, contemporary with Erlitou.

By definition, early states were stratified societies with regional settlement hierarchies, two characteristics that are visible in the archaeological record. Disparities in grave goods and the widespread distribution of walled sites are significant indicators that complex societies had formed in several regional settings. Most of these archaeological cultures and their regional types, however, have been sketched so far only in broad strokes. At present, only the Longshan and Liangzhu Cultures offer a reasonably wide array of data with which to move beyond what might be called ceramic definitions of those archaeological cultures. Both may have sustained incipient states. In the Middle Yangzi, the Shijiahe Culture of Hubei is another possible target.⁶

20 Introduction

The Terminal Neolithic of the third millennium B.C.E. was an interaction sphere as defined by Kwang-chih Chang, a world of neighboring complex societies, some possibly incipient states. In the North China macroregion, the first culture to emerge as a full-fledged state society was the Shang. Shang Culture is separated from the Terminal Neolithic by developments at two key sites in Henan, Erlitou and Erligang, the subjects of our first two chapters.

Chapter 1

Dawn of the Bronze Age: The Erlitou Culture (c. 1900–1500 B.C.E.)

In Chinese archaeology today, discussions of the origins of civilization and of the Bronze Age generally begin with Erlitou. Erlitou is a village south of the Luo River in Yanshi County that resembles many others in this part of North China. In archaeology, Erlitou is both a site, specifically a type site, and the name for an archaeological culture that existed in Henan and neighboring regions in the early second millennium B.C.E. The site stretches across open winter wheat fields south of the village toward two other hamlets, Gedangtou on the southeast and Sijiaolou to the south (Figure 1.1). A considerable earthen mound, the “Han tomb” with its small temple, sits east of the path leading south. The Erlitou Work Station of the Institute of Archaeology stands opposite behind the locked metal gate of a modern brick courtyard.

Erlitou is one of the most exciting targets in Chinese Bronze Age archaeology. Discovered in 1959 by Xu Xusheng as the result of a well-informed attempt to locate traces of the Xia—the first of the Three Dynasties (*Sandai*)—the site was first explored between 1959 and 1978. Initial finds were significant, including two large courtyards, immediately dubbed palaces, and a smattering of richly furnished, medium-scale graves with fine hardstones and the earliest cast bronze ritual vessels recovered in North China. Most of all, the culture as defined by pottery and other traits looked right as either the beginnings of Shang, or equally possible, its immediate predecessor, the Xia. For Chinese scholars the palaces virtually guaranteed a state-level of social complexity, while the ritual jades and bronze vessels confirmed an elite atop a stratified (“slave”) society. Add to these features its geographical location and chronological position, and the argument for Erlitou as Xia swept scholarly circles in the late 1970s.¹

Another twenty years of work has followed under a younger generation of archaeologists, but those results are known only from brief reports

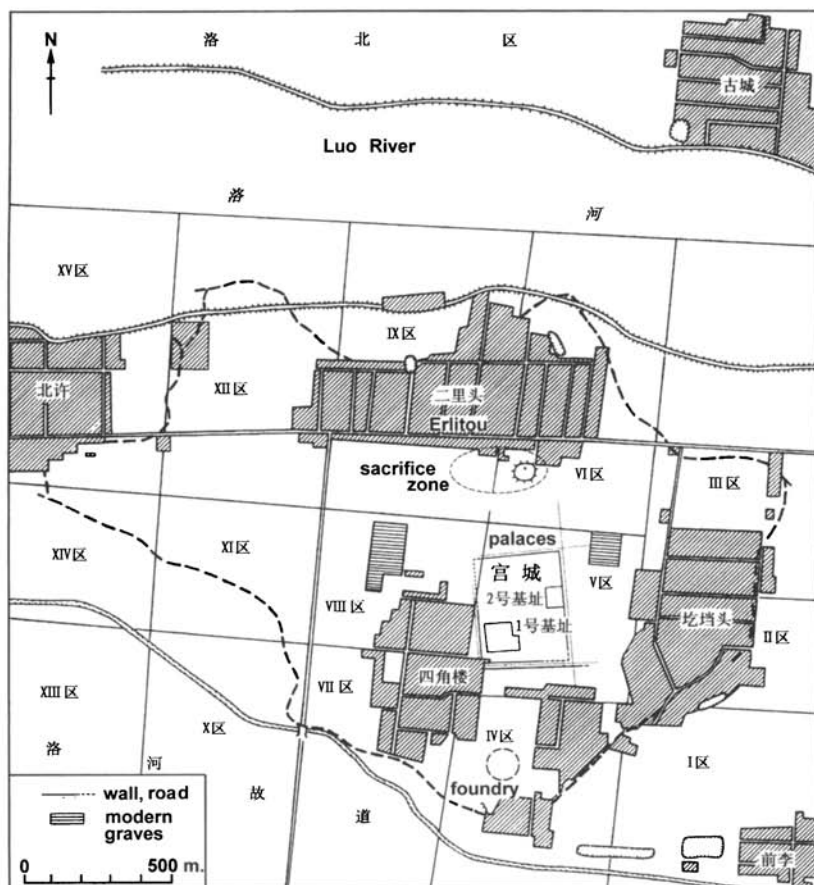


Figure 1.1. Erlitou site. *Kaogu* 2004:11:24.

with an emphasis on the richest graves.² Additional work is summarized in short notices published in annual yearbooks or in the Cultural Relics Bureau's biweekly newspaper. While this series of campaigns went forward, a major discovery in the backyard of Erlitou, the "Yanshi Shang wall," forced new thinking about the identity of both sites. The large walled site (Erlitou seemingly had no walls) was found in 1983 across the Luo River just west of Yanshi town near a power generating plant. Unlike the wall at Zhengzhou, the Yanshi wall lies mostly amid open fields. The greater part of its interior remains undeveloped, although roads and several villages and factories sit on some patches of land. The Yanshi wall immediately became a major focus of fieldwork for the Institute of

Archaeology, diverting resources from Erlitou. A long technical debate developed over the proper dating of the wall, a point with major implications for understanding Erlitou itself. Recently, as part of the Xia-Shang-Zhou Chronology Project, a consensus seems to have emerged (Box 5). In this new mainstream view, the walled Yanshi site marks the beginning of Shang, and putative capital of its founding king, Cheng Tang (see Box 10). Erlitou, at least in its flourishing periods III–IV, remains Xia.

Box 5 The Three Dynasties Chronology Project

Chinese scholars have long boasted of the continuity of their civilization, and contrasted it with the Nile valley or Mesopotamia, where modern peoples ostensibly have less in common with their ancient predecessors. Chinese historians and archaeologists have also lamented the lack of a reliable chronology for ancient periods. Since Sima Qian compiled chronological tables for his *Historical Records* (c. 100 B.C.E.; Box 3), the oldest firm date has been late in the Western Zhou dynasty, a year corresponding to 841 B.C.E. Many scholars have attempted to devise a rigorous chronology that would chart the inception and demise of the Zhou, Shang, and Xia, but none of their different, and conflicting, solutions has ever gained general acceptance.

In 1995–96, the head of the Chinese Academy of Engineering, Song Jian, proposed a multidisciplinary program that would employ the best contemporary scientific and archaeological methods to establish a master chronology for the “Three Dynasties.” The project was sponsored by a host of academies and government bodies, enlisting the expertise of about 200 scholars including historians, archaeologists, scientists expert in dating techniques, astronomers, and specialists in ancient texts and inscriptions. Their goals were: (1) to establish a “basic framework” for the datings of the Xia; (2) to establish a “fairly detailed framework” for Early Shang; (3) to establish an accurate chronology for the Late Shang kings from Wu Ding to Di Xin; (4) to establish an accurate chronology for the kings of Western Zhou down to 841 B.C.E. Calculations of the dates of celestial phenomena as recorded in ancient texts and inscriptions, and radiocarbon datings were to be used to date key sites. Tasks were broken down into nine large topics and about forty specific issues.

TABLE 1.1. Sandai (Three Dynasties) Chronology

This official, consensus chronology created by Chinese scholars blends archaeological-historical periods and kings' reigns, even though some of those rulers may be mythical and the transmitted sources recording reign lengths are open to question.

<i>Xia</i>		2070–1600
Yu–Gui		
<i>Early Shang</i>		1600–1300
Tang–Pan Geng		
<i>Late Shang</i>		1300–1046
Pan Geng–Xiao Yi	1300–1251	50
Wu Ding	1250–1192	59
Zu Geng–Kang Ding	1191–1148	44
Wu Yi	1147–1113	35
Wen Ding	1112–1102	11
Di Yi	1101–1076	26
Di Xin	1075–1046	30
<i>Western Zhou</i>		1046–771
Wu Wang	1046–1043	4
Cheng Wang	1042–1021	22
Kang Wang	1020–996	25
Zhao Wang	995–977	19

Source: "Xia Shang Zhou duandai gongcheng 1996–2000 nian jieduan chengguo gaiyao" [Xia Shang Zhou chronology project: summary of results from 1996–2000], *Wenwu* 2000.12:49–62. See Box 5 for discussion.

*The term "Middle Shang" (cf. Table 2.1) was not adopted in this chronology.

The results of these efforts appeared in summary form in late 2000. The main conclusions are summarized in Table 1.1. The key determinations concern several longstanding debates. For the date of the Zhou conquest of Shang, the participating experts narrowed this event down to the period 1050–1020, with a preferred absolute date of 1046. On the dates of the Late Shang kings, the reign of Pan Geng is assigned to c. 1300, and the reign of Wu Ding to 1250. Bracketing dates suggested for Early Shang are 1600–1300, while for Xia the basic framework is c. 2070–1600. The proposed datings in each case represent an attempt to rationalize evidence from C-14 datings, eclipse records, calendrics, and dated inscriptions.

A project like this has many obvious debts to conventional wisdom. For example, the number of years assigned to each Late

Shang king are obtained from traditional sources, not modern technology. And the organizers make no bones about their overall goals: to instill pride and solidarity among the Chinese people. While this chronology will remain open to dispute, and some non-Chinese scholars have been vocal in their disagreement, it does at least establish a common framework for the field as a reference.

Since 1999, a new cohort of archaeologists has taken the reins at Erlitou.³ Their agendas are dictated by tantalizing clues and frustrating gaps in the previous forty years of field work. Their initial efforts have reconsidered the extent of the site, tracing it further west, and have led to the discovery of a large ditch on the east and south as well as a road grid and walls on all four sides that may have defined a palace core. Thus the size and shape of this important type site, unique in North China in its own day, continue to change and offer up new clues.

The Erlitou Site

Erlitou village and the archaeological loci that have made it famous lie between two important rivers of western Henan, the Luo to the north and the Yi to the south. Further west along the former stand the ancient walls and modern city of Luoyang, an imperial capital for nine dynasties (Eastern Zhou through Five Dynasties). Southwest along the Yi are the limestone cliffs known for the Longmen cave-chapels of the Northern Wei and Tang periods, fifth through tenth centuries C.E. It is generally believed that the Luo moved northward after the time Erlitou flourished as an early Bronze Age center, so that some of the ancient site may well lie under, or have been carried away by, the river where it flows today. Recent work has discovered heavy silt deposits along both the north and south margins of the site, and some finds of the Erlitou period have been reported north of the Luo. The terrain is flat, a rich flood plain in perpetual cultivation for several thousand years. In recent decades these fields have been progressively leveled by local peasants in their efforts to create larger tracts easier to plow and cultivate. Although Erlitou is listed on the register of protected sites by the Chinese government, neighboring villages continue to grow, with new blocks of houses and small factories eating up the fields. These construction projects are sometimes preceded by probing and excavations by the Institute's Work Team. Indeed, a number of graves reported in the 1980s were discovered as a consequence. On other occasions, workers have made off with

accidental finds when archaeologists were not on hand, only to be investigated by Public Security. Several bronze vessels can be placed on the map but not securely established in an archaeological context because of these unsanctioned excavations.

Until the most recent surveys, the Erlitou site was estimated to be about 1.5 km east–west and about 2 km north–south, anchored by Erlitou, Gedangtou, and Sijiaolou villages (see Figure 1.1). This area is generally some 3–4 m higher in elevation than surrounding terrain, and cultural deposits of 2–4 m are recorded. Han-period levels have been located just beneath the plow zone, and Erlitou levels are usually directly under the Han. Beginning in 1960–64, the site was subdivided into nine zones designated sequentially with Roman numerals from I to IX in a 3 × 3 grid starting in the southeast. Thus Zone V was at the center. More recently six additional zones, X through XV, have been added on the west, from south to north. Revised estimates of the area are now some 2.4 km east–west by 1.9 km north–south, a rectangle rather than a square. (Across the north—abutting zones III/VI/IX/XII—may be other features under the present channel of the Luo River.) In this revised description, the palaces are clustered in the eastern half.

Investigators looked for a wall throughout the first forty years the site was worked, but without success. Walls are a defining trait of major sites in ancient China (compare Tables 0.1 and 2.2), and the identification of Erlitou as a Xia (or Shang) dynastic capital was compromised by this perceived lack. Recent work (1999–2000) north of Gedangtou village isolated a ditch deposit about 90 m from the village. The ditch is as much as 10 m wide and 4 m deep, and travels some 350 m north then west. An additional segment of 100 m may run south. The preliminary dating of the ditch itself is period II, with its fill in place by period IV. Thus when the two large palace compounds were in use, the site may have been delimited, at least on the east, by this considerable ditch. It appears unlikely the ditch was a source of soil necessary for building; it is 100 m or more from the foundations. It also may not have been of great value as a defensive measure. A gap of some 20 m has been located along the east; unless this area was gated or cut off by a palisade, entry to the site would have been free. This might be analogous to the situation at Anyang, where there was no wall on the surface. There a ditch on the west and south of the palace zone connected to the Huan River, effectively encircling the foundations (see Map 6).

Still more recent notices announce the discovery of both a road grid and palace walls. Since 2001, segments of road surfaces, 10–20 m across, have been traced on all four sides of the palace core (Palaces Nos. 1 and 2, see below). These roads share a common orientation with those two compounds and define a rectangular area. The surfaces were

in use from periods II to IV. The east road is as much as 700 m in length (north–south), while the north and south roads, each about 300 m in length (east–west) are separated by an interval of about 400 m. The area encircled by this grid is 10.8 hectares (108,000 sq m). The palace walls came to light only in 2003; they are inside the roads and create a slightly smaller rectangle. At 2–3 m in base width (and with surviving heights of only 10–75 cm), these walls seem to have been constructed after the earliest roads were in use. Only shallow trenches were noted on the west and south; the east and north walls were built from ground level. The restored wall dimensions are: east wall 378 m, west wall 359 m, north wall 295 m, and south wall 292 m. Significantly, the east palace precinct wall is the east wall of Palace No. 2 (see Figure 1.2b), which was built against it at much the same time.

Pottery recovered from the site is copious and has been the object of sustained attention. The number of levels recognized at the site and their analysis have gone through repeated reinterpretations. The senior generation of archaeologists recognized four levels from the Erlitou period covered by two Erligang levels. The four Erlitou levels are dated by carbon-14 between approximately 1900 and 1500 B.C.E. Finds from Erlitou period I, however, are few, and this is explained as the result of lengthy occupation of the area and consequent destruction of early features. The site flourished in periods II–IV, with its major foundations dated to period III. Both Lower and Upper Erligang levels are limited in extent. This would have been the period when the walled site at nearby Yanshi flourished. These same excavators identified Erlitou periods I–IV as the Xia culture, specifically its last capital (*du yi*). Other writings from the 1970s through the 1990s split the Erlitou periodization variously, between I and II, or II and III, or III and IV, assigning earlier strata to Xia and later ones to Shang. Without firsthand access to profiles and pottery, it is probably impossible for an outsider to pass judgment. In periods II–IV, Erlitou certainly was a major center, with specialized structures and unique industries such as bronze casting.

Architectural Remains

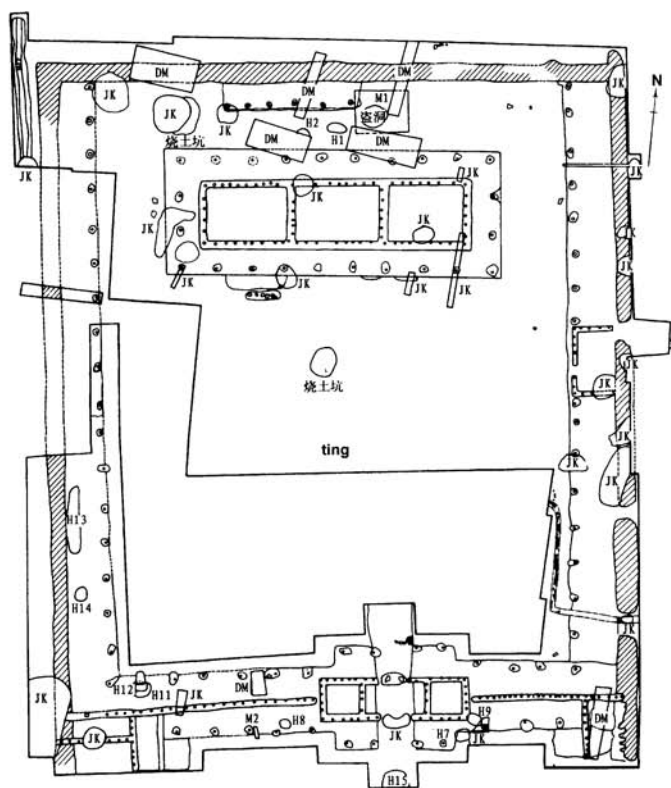
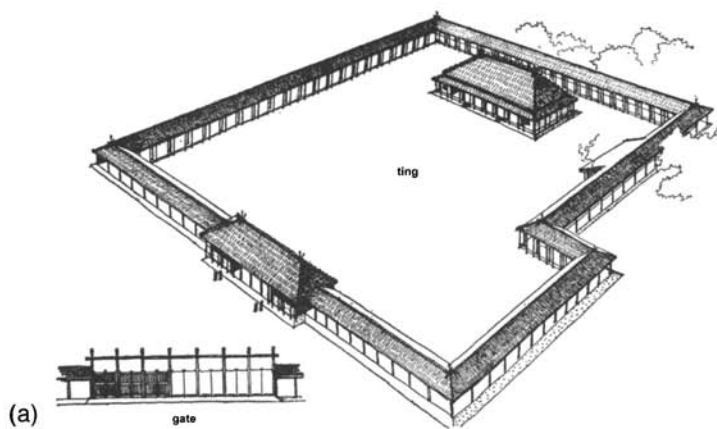
The large pounded earth platforms in Zone V first made Erlitou a serious candidate for status as an ancient capital. Excavation of Palace No. 1 in 1961–64 and 1972–74 documented a quantum leap not only in building design and construction, but also in the social fabric to sustain such a project. The courtyard plan, so self-evidently ancestral to later palaces, temples, and other elite structures, seemed to vouchsafe the existence of a king, and hence a state, in the Chinese context. The poor condition of the first courtyard was offset to some degree by the much better

preservation of the smaller second palace, located not far northeast. Only recently, however, has it become clear that these compounds were but two among many large structures that occupied the site.

This new picture emerges from summary remarks in the formal report for work between 1959 and 1978, and from various brief notices. By 1978 probing had shown the Work Team that the two excavated courtyards were simply the largest of some thirty-four (!) sizeable pounded earth foundations. These other loci range from 40–50 m to 20–30 m in length, roughly half the size of the two palaces in their long dimension. They have not been mapped on the excavation plan, but would consume a considerable amount of space in Zones IV–V–VI between Gedangtou and Sijiaolou on the south and the Han tomb and Work Station on the north. Yearbook notices for 1986 and 1993 augment this picture.⁴ Large foundations have also been located in Zones V, VI, and IX (all period II). Two of these may rival the better-known palaces: one in Zone VI is 20+ × 120 m, while another in Zone IX is about 100 m square. Each seems to have a pounded earth block 3 m thick. Their location along the northern tier, moreover, suggests another possible cluster of important structures.

The two well-reported courtyards are properly described as the earliest examples in North China of a palace plan (Figure 1.2). This plan utilized a square or rectangular walled yard oriented with the cardinal directions. The yard was entered from the south through a gate or gatehouse aligned on the central axis. Upon entering, one is cut off from the surrounding world and its population; only sky is visible above the walls. Within the yard the axis leads to a main hall raised above ground level. This hall sits across the axis, its long dimension running east–west, and is to all appearances a stage for performances before an audience. The hall is itself rectangular, with a porch surrounding roofed, walled chambers. In the “Pan Geng” chapter of the *Book of Documents* (*Shu jing*), the text (allegedly dated early Western Zhou period) explicitly states that “the king ordered the multitude all to come to the court-yard.”⁵ The graph for “courtyard” is *ting*, and should be applied to the two compounds at Erlitou. Usage in Shang oracle-bone inscriptions (from c. 1200–1050 B.C.E.) and in Shang and Western Zhou bronze inscriptions confirms the *ting* was the setting in which a king (*wang*) addressed his retainers, and in which solemn ceremonies and sacrifices legitimated the king’s power. A *ting*-courtyard was not, however, necessarily a residential palace. To suggest its multiple possible functions revolving around the

Figure 1.2. Courtyards at Erlitou: (a) Courtyard 1, zone V, rendering by Yang Hongxun, Yang, *Jianzhu lishi yu lilun* (1984), p. 26; (b) Courtyard 2, zone V, *Yanshi Erlitou* (1999), p. 152.



king in his roles in cult and state, David N. Keightley suggests the usage “palace-temple.”⁶ In Shang times, the palace-temple was the seat of the ruler’s power and authority, both as head of state and as the living link between the royal lineage and the spirits of the ancestors and High God (see Chapter 4).

Interpretation of these two halls lies at the heart of discussions of the Erlitou site and its archaeological culture. If the functions for a *ting* documented in the earliest paleographic and textual sources of the late second millennium B.C.E. were already conducted in the early second millennium in these yards, then someone akin to a later Shang or Zhou king probably used the Erlitou site. Moreover, in the usage of the Eastern Zhou period (mid-to-late first millennium B.C.E.), a site in which ancestral temples are clustered is defined as a “capital” (*du*). Might not many of the large foundations noted (but not yet reported) at Erlitou have been such temples, especially any that, like Palace No. 2, contain a large tomb? Both of these inferences give confidence to scholars who see Erlitou as a dynastic capital, whether Xia or Shang. Against these assertions, one must note the lack of artifactual evidence for the actual functions of the two courtyards. Leaving aside the large tomb (discussed below), the formal report’s detailed account lists few functional features: two water wells immediately outside the west wall of Palace No. 1, and a cluster of sacrificial burials around a large pit (another tomb?) just behind its main hall. No ritual paraphernalia such as oracle-bones or ceramic vessels of suitable types was recovered from these courtyards, nor were activity areas deduced that might directly support the palace-temple identification. Instead, ground plans remain the evidence at Erlitou for king and state.⁷

The most recent campaigns at Erlitou under the direction of younger scholars have explored areas surrounding the two large palaces as well as below them.⁸ Their preliminary notices have documented six more foundations, one (F3) under Palace No. 2, three others (F4–6) flanking it on the south, west, and north, and two foundations (F7 and F8) in front of the Palace No. 1 gate and southwest of the same compound, respectively. Thus the next few years will see a fundamental redrawing of the size, shape, and distribution of features in the palace precinct at Erlitou.

Houses, Workshops, and Burials

One significant omission in the formal report (covering 1959–78) and subsequent brief reports (for 1983–92) is any map detailing how features like house foundations and burials were distributed across work zones. For period I (ostensibly 1900–1800 B.C.E.), we have no evidence for

houses, a few graves, and no other features except storage pits. These traces are confined to Zones II, IV, V, VIII, and IX. So far as one can tell, this was a modest settlement. For period II (c. 1800–1700 B.C.E.), a total of nine houses and thirty-five graves are similarly dispersed. Period III (c. 1700–1600 B.C.E.) reveals fourteen houses and seventy-one graves scattered across seven of the original nine zones, omitting southeast (I) and southwest corners (VII). And for period IV (c. 1600–1500 B.C.E.), four houses and fifty-three graves are reported with a like distribution. Short notices for work of the 1980s and 1990s indicate much larger numbers of graves have been dug, but they are not yet reported. The excavations that yielded these results were not, however, themselves random, and we cannot assume findings are representative. Tracts dedicated exclusively either to houses or to burials might still be found, although present data suggest that over time and sometimes in the same period, houses, pits, and burials were mingled.

The evidence for houses remains inconclusive. Leaving aside the smallest pounded earth foundations, we have twenty-seven houses, less than half relatively well preserved. They are both semisubterranean and surface structures, and most are several meters long and wide, creating internal areas of 5–12 sq.m. Several houses had doorways, one even steps inside and some traces of large posts that carried the roof. In two instances the excavators believe a single house had two connected chambers. Wattle-and-daub construction is present, with several kinds of floors (hard-packed, burned, and/or coated with lime), and walls consist of footings and rows of small posts. Thus we know most residents of the Erlitou site lived much like their Longshan Age ancestors. We have no internal settlement plan, or possible zones for houses, kilns, livestock pens, workshops, graves, or changes in the same over time. Nor can we estimate population using whatever rule-of-thumb we prefer (persons per chamber, persons per unit of area) The present excavation team will address some of these gaps in data.

No workshops were reported in the formal report, but industrial debris suggests several possible locales. A number of fragmentary kilns were noted in Zones IV, V, and IX, although few obvious potter's tools (paddles, scrapers) have been found. Waste from bronze casting is consistent throughout periods I–IV, including sherds from crucibles used to heat alloy, slag (waste from pours), and ceramic piece molds for casting (see below). The archaeology yearbooks for 1984 and 1985 summarize work at a casting locus in Zone IV, south of the two palaces.⁹ One workshop area there is about 5.5×10 m, with a hard-packed raised surface built up from many thin layers, in which are a mix of burned soil and corrosion from bronze. Nearby is a house with two chambers, and several other similar sites are nearby. The largest so far reported is

a surface 16×6 m. The excavators report their impression that these working areas were tidied up, swept clear and clean putting the debris into nearby pits. A number of graves were found within hard-packed working surfaces. These casting sites are dated to late period II. Another possible workshop area was unearthed in Zone VI, in this case a large shallow pit full of animal bone, half-finished bone objects (awls, arrow points, spatulas), and various stone and ceramic tools. This site is dated period IV.

The most numerous features of the Erlitou site are burials, a total of 168, spanning periods I–IV. Brief notices mention excavation of many dozens more. Unlike many prehistoric settlements, Erlitou apparently had no dedicated cemetery zone removed from habitations. Burials instead are ubiquitous throughout all zones except the southeast and southwest corners (Zones I and VII). The latter is marked on site maps as a marshy area; perhaps it was unsuitable for graves. All graves are small or medium in scale (Figure 1.3). (By convention trenches less than 2 m long by 1 m wide are classed as small.) Some burials lack even a defined trench, and some may be sacrificial pits. Wooden chambers have been recognized, and some coffins may have been lacquered. Grave goods, mostly pottery, range from three to twenty items, and twelve graves are reported with bronze vessels or other objects (bells, plaques). Likewise, impressively worked hardstones are reported from burials, as are traces of lacquer objects. A few burials contained large numbers of cowrie shells. Hence even though graves are classed simply as small or medium by the excavators, some have many more prestige goods than the norm.

Only one burial can be considered large, in this case a trench on the order of ten times the normal area. This is the tomb found immediately behind the main hall of Palace No. 2, its shaft measuring 5.2×4.25 m with a depth of 6 m. The tomb is aligned with the south gate, and hence shifted slightly east of the center of the main hall. The shaft was dug after the courtyard had been built and was covered by packed surface from the time the yard was in use. Although it was cleaned out by looters, a dog skeleton in a lacquered box was left in place. The presence of this tomb at the rear of the courtyard probably was related to the function of this edifice. If the function was sacrifices to the ancestral dead, Palace No. 2 might be an ancestral temple.¹⁰ The abnormally large shaft also suggests an extreme contrast in status between the individual interred here (a king?) and most persons. Both lines of inference help the arguments of those who see Erlitou as a dynastic site. Palace No. 2 is smaller in scale than Palace No. 1. Perhaps other compounds of similar scale functioned as temples of this kind, while larger yards served another function, such as gatherings. With one or two additional large

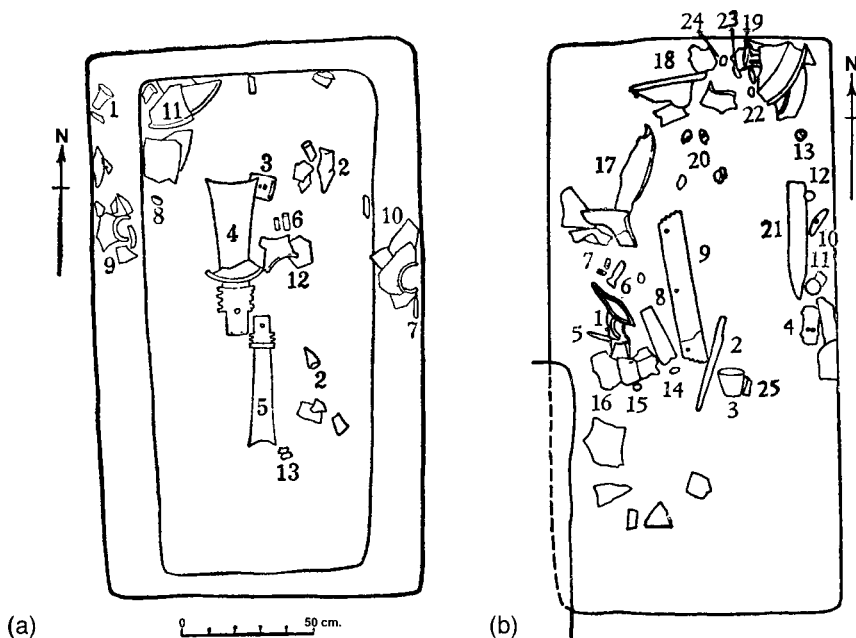


Figure 1.3. Tombs at Erlitou: (a) Grave V:3, period III, *Kaogu* 1983.3:202; (b) Grave VI:57, period IV, *Kaogu* 1992.4:295. Two of the richest graves at Erlitou, V:3 and VI:57, are both rectangular trenches, the former with a ledge surrounding the coffin area. Each base was covered with a layer of cinnabar 2–3 cm thick, but little of the lacquered wood chambers or of the skeletons survived. V:3 had two jade scepters (*zhang*, nos. 4 and 5), placed on the chest of the deceased. VI:57 may be the richest Erlitou grave reported to date, with four bronze objects: a *jue* cup (no. 1), bell (no. 3), plaque with turquoise inlay (no. 4, illustrated in Figure 1.8c), and knife (no. 2).

platforms now identified in the northern zones, Erlitou may have had several ceremonial loci of this second type.

Erlitou in Regional Context

The Erlitou Culture is now recognized at more than 100 sites spread across Henan, Hebei, Shanxi, and Shaanxi. The Western Henan type has been identified at more than sixty sites. Many of these so-called sites were identified as the result of pedestrian surveys from the 1950s to the 1990s. Hence for many points on the map the evidence was merely a collection of sherds diagnostic of the Erlitou Culture. Only a few sites have been excavated and reported. Most are burials such as Donggangou in

Luoyang, Dongmagou and Cuoli in the Luoyang suburbs, or Nanzhai some 20 km down the Yi River from Erlitou itself. One village settlement near Luoyang has been reported recently,¹¹ but no center that could have competed with the type site has yet been recognized. (A recent survey east of Erlitou has begun to redress these lacunae; see Box 6.)¹² Qualitative contrasts are even more pronounced. Only Erlitou itself has yielded traces of metal working in quantity, and only here have bronze vessels, bells, and plaques been found. The same restrictions apply to other prestige goods like hardstones and lacquer wares. Thus, on present evidence, the type site must stand as the regional hub of a widespread archaeological culture.

Box 6 Regional Survey and Erlitou

The early Bronze Age sites discussed in this book are reported from a variety of Chinese sources, most preliminary, some more extensive, but generally with little reference to regional context. With the exception of Anyang, which has been the target of a systematic regional survey in recent years (see Box 13), only Erlitou has begun to benefit from a settlement survey investigating relationships among a center and outlying communities. This survey is a cooperative venture between Chinese and foreign scholars focused on the lower reaches of the Yi-Luo River near Gongyi City, downstream (east) from the Erlitou type site. Data reported at present are the result of a "full-coverage" survey of two tributaries, the Wuluo River and the Gan'gou River, an area that includes the northern flanks of Mount Song (Fig. 1.4). A total of 117 pre-Han sites were identified in four seasons between 1998 and 2000. The survey area comes to about 124 sq km. The earliest sites are five attributed to the Peiligang Culture (c. 6500–5000 B.C.E.); the latest are from the Zhou (c. 1046–221 B.C.E.). The investigators have set as their goal nothing less than achieving an understanding of the development of social complexity in the "belly" of traditional Chinese history, the Luoyang region of the Central Plains.

Although the survey did not include the Erlitou site area itself, the region was in proximity to it and the Shang wall at Yanshi (see Chapter 2). In the Longshan Age, the survey area supported about forty-four sites, with areas ranging from 600 to 200,000 sq m. In the

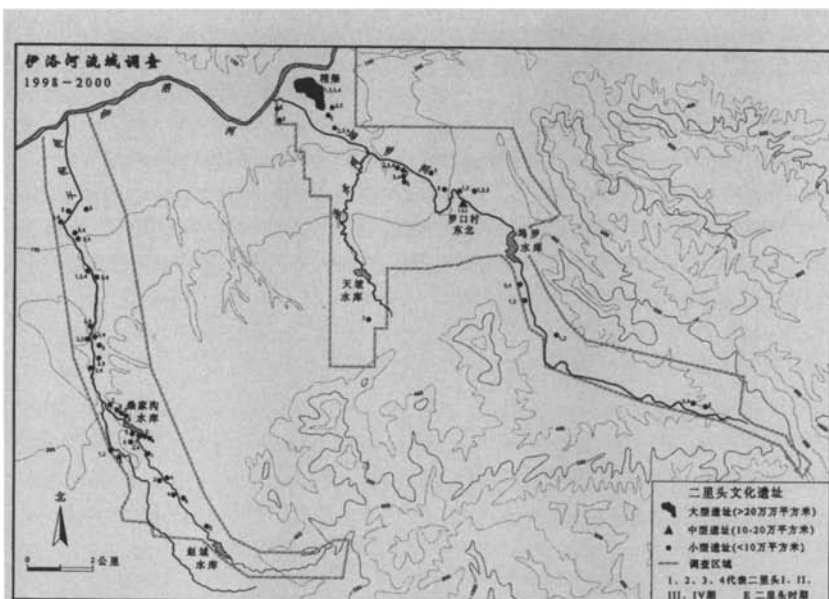


Figure 1.4. Erlitou Culture sites, Yi-Luo Drainage, Henan. *Kaogu xuebao* 2003.2:176.

Erlitou period, the number of sites increased to fifty-two, ranging in size from 1,000 sq m to 600,000 sq m. For the first time in this region, a three-tier hierarchy of settlements was evident. While most sites were small communities, presumably farming villages, an intermediate center appeared on the Wuluo River, and a large regional center flourished at Xiaochai on the main stream Yi-Luo River. There is tantalizing evidence that Xiaochai may have supported some elite population: sherds and vessels of white pottery, a ritual ware. Moreover, the clays for producing such ritual vessels are found in the slopes of Mount Song; Xiaochai may well have been a center controlling this resource. Likewise, a large site west of the survey zone, Huizui, may have been another regional center, a key source for lithic production. Like the white clays, good stone is not available at Erlitou. Thus the survey team suggests that control of resources may have played a significant role in the development of local and regional centers flanking the Erlitou type site.

In the centuries preceding the Erlitou Culture, local centers had begun to appear in other parts of Henan. In central Henan, a walled site of the Longshan Culture flourished at Wangchenggang in Dengfeng County on the other side of Mount Song.¹³ Here two small walled compounds were found in ruined condition (Figure 1.5a), and extensive areas within the walls were exposed. In spite of its lengthy formal report, which usually promises more data, we know very little about the character of this site. It may have been a fortified citadel. There is some evidence for its continued occupation during the time of the Erlitou Culture. Further afield, within the area of the Eastern Henan Erlitou type, lies a promising site at Pingliangtai, in Huaiyang County.¹⁴ This site spreads over 50,000 sq m with deposits of 3–5 m. Its walls measure about 185 m on each side enclosing an area of some 34,000 sq m (Figure 1.5b). The wall is substantial, about 13 m wide at its base, 3 m in height and 8–10 m wide at top. Houses, kilns, and some burials were found inside. Its occupation is dated c. 2300–2100 B.C.E., immediately prior to the Erlitou Culture.

These two examples, and several other recent reports of Longshan Age walled sites like Mengzhuang, Huixian, confirm the special character of Erlitou. It certainly had an extensive walled palace core. The focus of the site was most probably its many courtyard compounds, palace-temples, used by paramount leaders or elites or lineages. Clustered nearby were specialized industries, including bronze casting, that served the needs of these groups. Erlitou could have had a substantial population, but this is still impossible to estimate. It could have been what Paul Wheatley called a “ceremonial center,” a locale where important ritual functions were performed.¹⁵ On the other hand, excepting one looted large grave, putative kings are conspicuously absent from Erlitou burials to date.

The Material World: Bronze and Jade

Archaeology derives data from the scrutiny of the world of physical things both large and small. In discussing the Erlitou site, we focused on large things: pounded earth foundations, remnants of houses and workshop floors, and the ditch that may encircle the area. More abundant things lie in strata that comprise the site, especially the pits and graves that are its most ubiquitous features. Durable stone, bone, shell, and pottery artifacts comprise most of the physical evidence for an Erlitou Culture, both at this site and across a wider domain. Pottery in particular is diagnostic. The distribution of the culture, its relative chronology, and its relationship to earlier and later archaeological cultures (Henan Longshan or Erligang), are understandings derived from

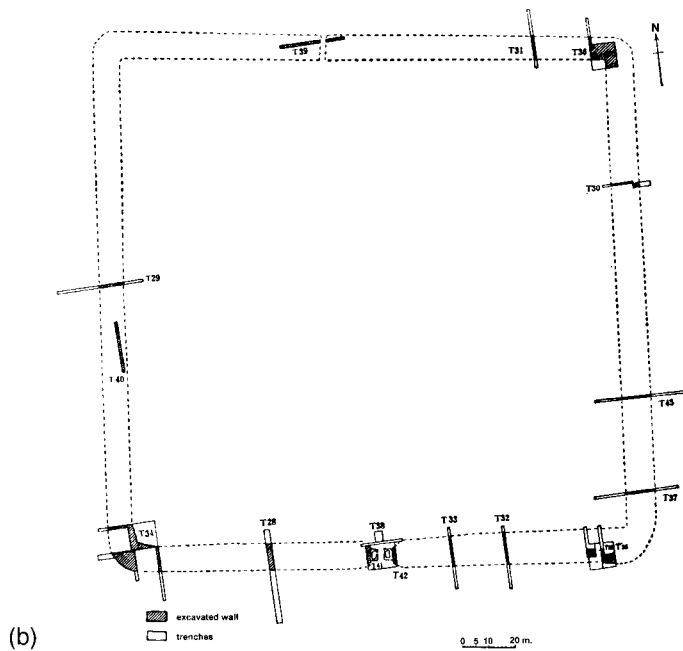
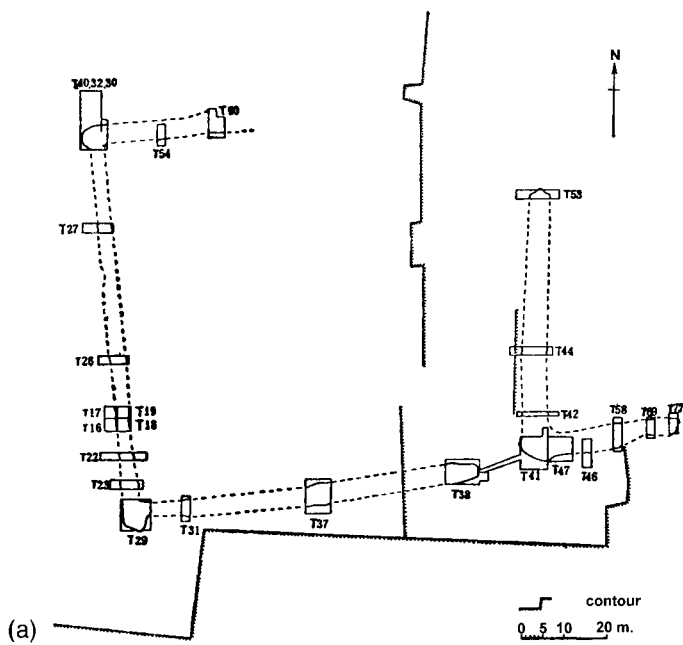


Figure 1.5. Longshan Age walled sites: (a) Wangchenggang, Dengfeng, Henan, *Wenwu* 1983.3:14; (b) Pingliangtai, Huaiyang, Henan, *Wenwu* 1983.3:27.

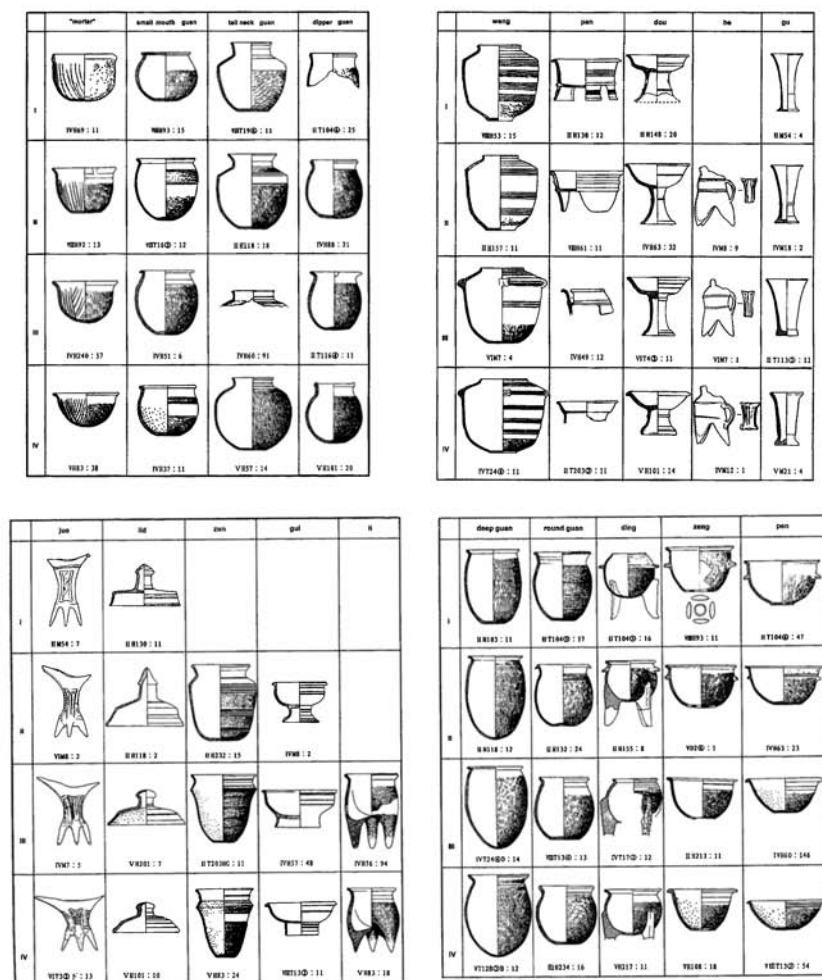


Figure 1.6. Pottery of the Erlitou Culture. *Yanshi Erlitou* (1999), pp. 34–37. These nineteen types include deep crocks (*guan*), cooking tripods (*ding*), steamer bowls (*zeng*), basins (*pan*), serving dishes (*pan*, *dou*), pouring tripods (*he*, *jue*), and goblets (*gu*). The development of each type is shown from top (period I) to bottom (period IV), spanning c. 1900–1500 B.C.E.

the close examination of pottery. Sherds from pits and whole vessels from graves have been studied intensely by Chinese archaeologists, who array them in developmental series (seriations) correlated with excavation levels (Figure 1.6). If the distinctive shape and features of vessel types are diagnostic of the culture, their finer details are an index to the position of a sherd or vessel in a chronological seriation.¹⁶

Erlitou pottery is primarily gray ware made from fine loess; some is tempered with sand. Pots were made by a combination of hand-forming, mold, and wheel techniques. Surfaces may be impressed with checks from paddling with a cord-wrapped tool, or incised with a stylus. Some pottery is burnished smooth bringing it to a lustrous black. The vessels were fired in a reducing kiln, burning the paste a uniform gray. The array of major types illustrated here includes flat and round bases, ring feet, pedestal feet, and pod bases. Many crocks (*guan*)—larger and smaller, deeper and shallower—were made for storage, and many lids with knobs are also found. A large pot with four lugs (*si xi hu*) must have been used for carrying its contents (water?) using a shoulder strap. Deep bowls with solid tripod supports (*ding* and *li*) served for cooking over a fire. Serving vessels have smooth surfaces: shallow basins (*pan*) on three flat feet, a pedestal dish (*dou*), a drinking goblet (*gu*), and an array of tripods (*jue*, *jia* or *gui*, *he*) for warming and then pouring drink. The Henan and Shandong Longshan Cultures reveal many similarities, especially the dominance of gray and black wares, tripod shapes, and the restrained approach to surface decoration.

These ceramics testify to a large-scale industry producing sizeable quantities that were replenished regularly. It is not known if the potters were full-time specialists, part-time household producers, or something in between. The fragmentary kilns unearthed at the site were in Zones IV (locus of the casting workshop) and IX (northwest). Only the firing chambers and grate above, which allowed hot gases to rise and cook the pottery, were preserved. These kilns could have been community assets or monopolized by a few skilled specialists. Clay and fuel sources were ample, and kiln technology allowed relatively high-fired pottery to be produced with confidence. Mastery of this ceramic technology was prerequisite to development of a bronze industry. Piece molds for casting, crucibles and furnaces to heat alloy, and the assortment of vessel types are all direct debts to ceramic technology.

While pottery is durable, and survives in quantity, other common materials perish. Cordage (known from impressions in clay), basketry, textiles (indicated by loom weights), and wood are unknown so far in the excavation record. Lacquer ware is attested by red flakes in some graves, and several types (*gu* goblet, *he* box, and drum) were probably made. In imagining and understanding the Erlitou material world, we operate with a huge loss, as if a giant vacuum had sucked out all perishable goods, leaving behind mostly stone, bone, shell, and clay.

Bronze for Ritual

From its first excavations, traces of metal were a part of the archaeological record at Erlitou. Fragmentary crucibles, clay molds, and slag are

reported from many ash pits of periods I–IV. A large number (32+) of diminutive bronze blades have been recovered, along with an assortment of other small items like awls, chisels, arrow heads, and fish hooks. The blades are reminiscent of small knives documented in the Qijia and Siba Cultures of the Gansu corridor (see Figure 1.16). On the other hand, the larger bronze objects found at Erlitou—bells, plaques with turquoise inlay, weapon types, and vessels (see Figures 1.7–1.12)—are unique to the site. For this reason, Chinese scholars properly describe Erlitou as the “dawn of the Bronze Age.”

Studies of the alloys used at Erlitou suggest that tin and lead were mixed with copper in ways suited to the function of the objects.¹⁷ Thus a weapon might have a high tin content for hardness. Some specimens are pure copper, while others are zinc-copper or tin-copper alloy. The ternary alloy (copper with tin and lead) that characterized much Shang bronze casting appears only in period IV at Erlitou. Lead was vital to pouring the alloy successfully into complicated, thin-walled mold assemblies. Studies of the lead found no examples of the high radiogenic isotope ubiquitous in bronzes from the Erligang period through late Yinxu (period III) in northern and southern sites. This unusual lead must have emanated from a common source, but one not accessed by the foundries at Erlitou. Ores used there may have come from the east, perhaps modern Shandong.

While all vessel types are dated to periods III and IV (hence, by convention, c. 1700–1500 B.C.E.), the first large objects to appear in bronze were small bells (*ling*) and turquoise inlay plaques. Three bells are dated to period II and two more to period IV. Three of the five bells were found in graves in association with plaques placed near the skeleton's chest or waist. These bells are consistent in size (less than 10 cm in height), and all had traces of fabric (Figure 1.7). The bells are conical in shape and elliptical in section, with a small loop at the top and two holes. Since there is no clapper, one may have been suspended within. Each bell also has a flange on one edge. At least one parallel example can be identified outside the Erlitou Culture, a bronze clapperless bell found near the pelvis of a skeleton in the huge cemetery at Taosi, type site for that Shanxi Longshan Age culture. Although smaller than the examples from Erlitou, the Taosi bell was also wrapped in cloth. Its alloy is 98 percent copper with traces of lead and tin. Lothar von Falkenhausen has suggested the Taosi bell was worn at the waist by a shaman, and we might deduce the same usage for the Erlitou bells.¹⁸ Perhaps they were worn with a garment or a shield that had an inlaid plaque affixed.

The plaques are among the most fascinating objects to emerge from the Erlitou Culture (Figure 1.8). Each is a small (14–16 cm) convex

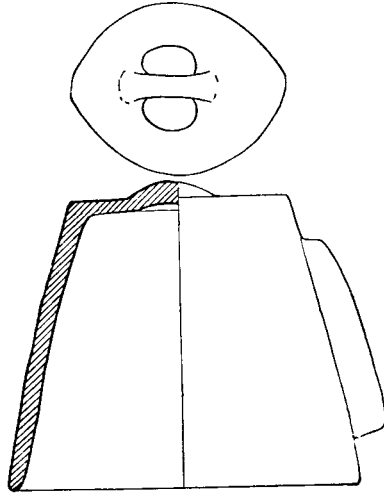


Figure 1.7. Bronze bell, Erlitou, Grave VI:11, height 7.7 cm, period IV. *Kaogu* 1986.4:321.

rectangle with rounded corners and four diminutive attachment loops. Traces of fabric are also reported. Bronze bands describe the elements of a mask, while their surfaces are filled with small pieces of turquoise (as many as 400 in one case). These masks have a pair of eyes in their lower third. In two cases the eyes are round, in one case round within pointed sockets. Two of the plaques have similar forms below the eyes, probably snout and jaws, but all three are different above: in one case a rack of horns, in another twelve cells or scales. These designs do not presage motifs on Erligang pottery and bronze vessels, but they are similar in some details to motifs incised in Erlitou pottery. Several unpigmented examples of these plaques were published before excavated examples came to light.¹⁹ At the time they were tentatively identified as horse frontlets, although then as now there is no evidence for horses at this early period. Turquoise is relatively plentiful at the Erlitou site, and is considered further below. Use of turquoise for inlay on metal reappears in the Yinxu period, after having dropped from casting during the Erligang period.

Weapons recovered to date are a few blades hafted at right angles to wooden handles, merely three examples from the dozen richest graves and another recent discovery (see Figure 1.9). The blades were cast in a simple bivalve mold set. Two *ge* (dagger-axes) are pointed blades with cutting edges along each side and a perforated tang for hafting. Each

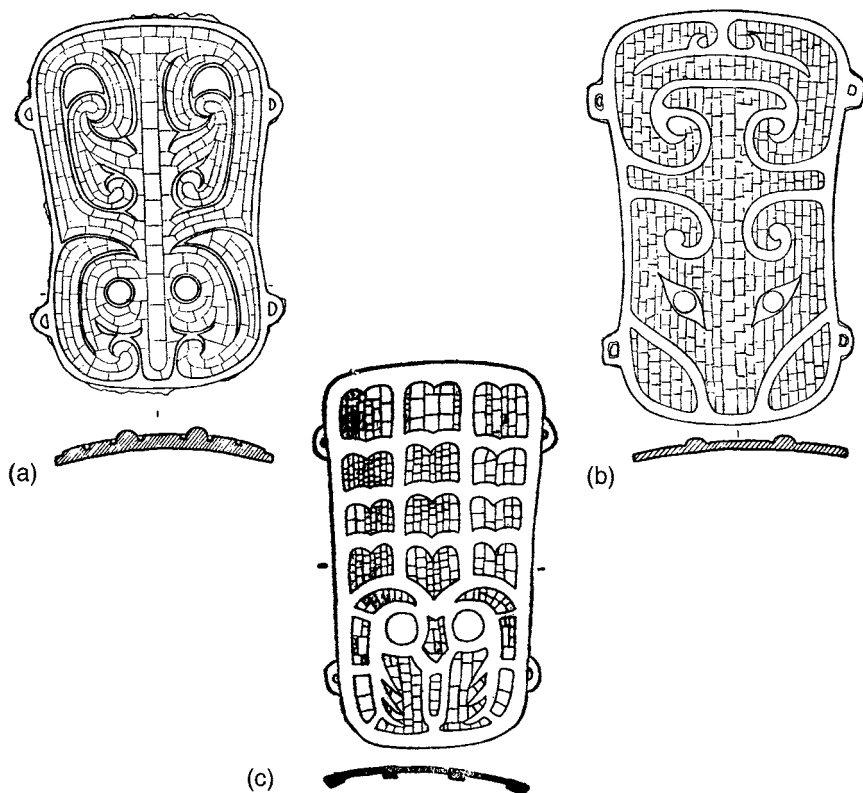


Figure 1.8. Bronze plaques, Erlitou: (a) Grave V:4, height 14.2 cm, period IV, *Kaogu* 1984.1:38; (b) Grave VI:11, height 16.5 cm, period IV, *Kaogu* 1986.4:321; (c) Grave VI:57, height 15.9 cm, period IV; *Kaogu* 1992.4:296.

tang is treated differently; the larger example may have had inlay. While the bronze *ge* dagger-axe became the mainstay of Bronze Age warriors in China, these examples may have been carried instead as regalia. Several hardstone *ge* blades were also found at Erlitou. A third blade has a convex cutting end, and the tang is demarcated from the blade by a pair of nubs. It also may have been a ceremonial rather than functional object. The recent find of a *yue* flat axe came courtesy of peasants building a new house north of Gedangtou.²⁰ This blade may have had a tang now broken off. Its single hole would allow binding to a shaft or perhaps hanging an ornament. It is a low tin alloy, regarded as too soft for actual use in warfare. Hence all the bronze weapon types presently known from Erlitou seem to be ceremonial gear.

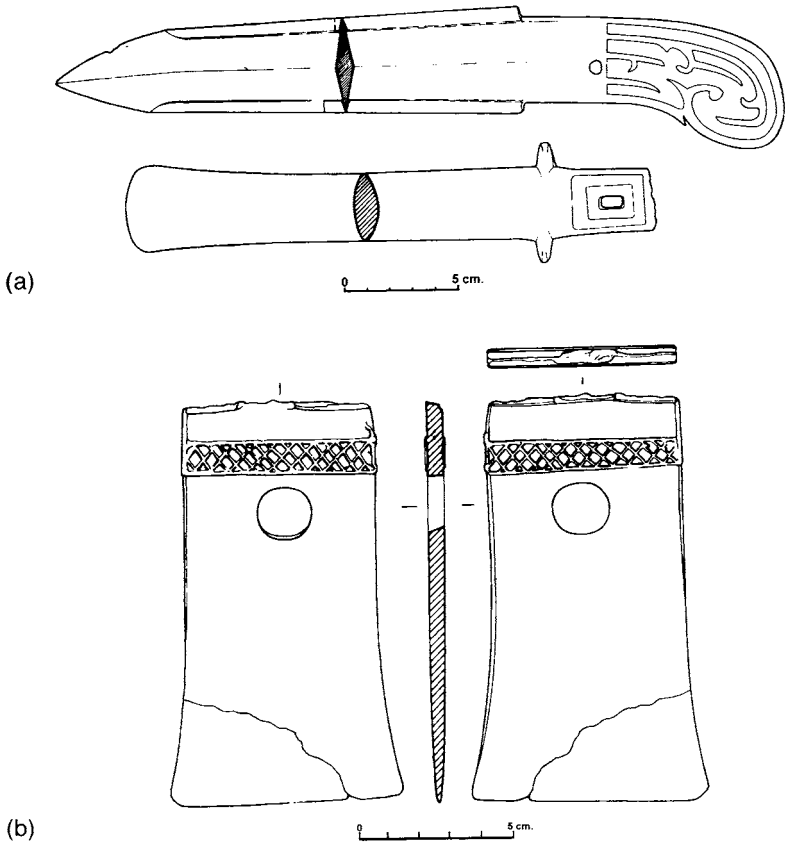


Figure 1.9. Bronze blades, Erlitou: (a) *ge* and *qi*, Grave VI:3, lengths 27.5 cm and 23.5 cm, period III, *Yanshi Erlitou* (1999), p. 249; (b) *yue*, Zone III, length 13.5 cm, period IV, *Kaogu* 2002.11:32.

The first vessel from the Erlitou site was found in 1973 in a period III stratum of Zone VIII. This *jue* pouring cup has since been joined by a dozen others, all dated to periods III and IV. All but two were excavated from graves. Three additional vessel types have since appeared: three *jia* tripods, a *ding* tripod, and a *he* pitcher. This assortment of vessels corresponds to pottery assemblages found in Erlitou graves from period II onwards. Those vessels were made from a fine gray or white clay; they often occur with pottery *gu* goblets. Since questions of date and context attend both the bronze *ding* and *he*, we can say with confidence only that Erlitou graves had either bronze or ceramic pouring cups

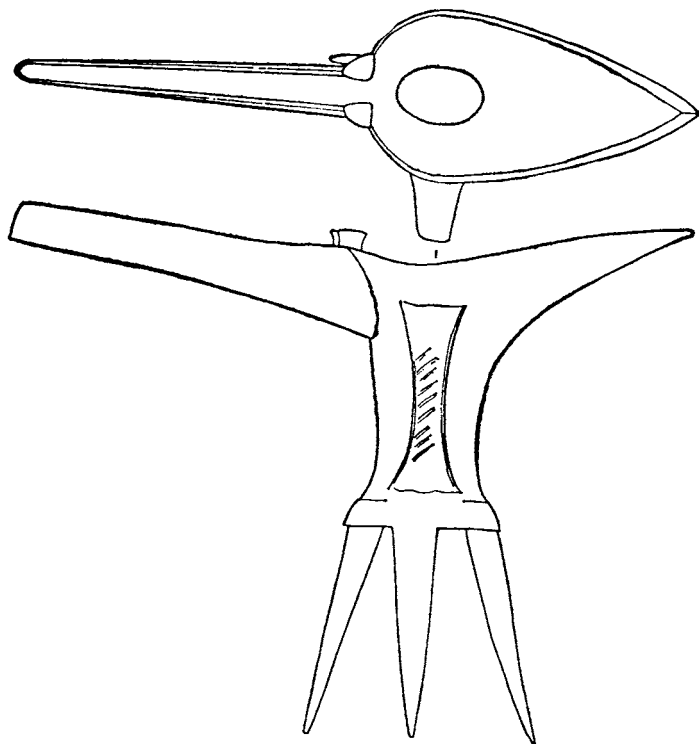


Figure 1.10. Bronze *jue* vessel, Erlitou, Grave VI:11, height 20.7 cm, period IV. *Kaogu* 1986.4:320.

(*jue*) and warming vessels (*jia*, *gui*, *he*), while goblets (*gu*) were made of pottery and lacquer.

The pouring cups stand on three solid legs of variable height, one at each end of the elliptical body and one centered at one side (Figure 1.10). This leg is aligned with a strap handle, sometimes perforated, large enough to accommodate several fingers. The handle makes possible pouring liquid contents with a trough spout that extends from the lip of the vessel. The spout is balanced by an extended tail. The body itself is a small biconical cup with a flat bottom. Alcoholic drink could be warmed by anchoring the cup with its pointed legs, and then poured neatly from the spout. Since *jue* so often occur with *gu*, its contents were quite possibly poured into the goblet before consumption. *Jue* could serve equally well for libation, as suggested by Late Shang graphs showing drops of liquid falling from the spout. While most early bronze *jue* are consistent

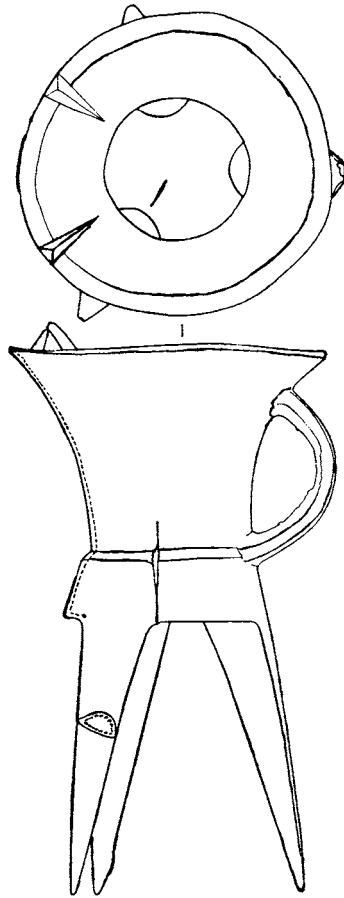


Figure 1.11. Bronze *jia* vessel, Erlitou, Grave VI:9, height 30 cm, period IV. *Kaogu* 1986.4:320.

in these attributes, a variety with a tubular spout emerging below the lip is sometimes found in pottery and bronze.

The *jia* warming vessels are similar to *jue* in design, but with several important differences. The *jia* are circular in cross-section, and have a round rim (Figure 1.11). Three legs create a triangular pattern, and the strap handle is aligned above one. Two of the three examples from Erlitou have small knobs on the rim opposite this handle. In fact the three examples found at Erlitou (one collected, one properly excavated, one looted) represent three variations. The excavated example shown

here has much in common with *jue* found in the same grave: long legs and a sleek silhouette. The looted example has a body in two parts, the lower portion rounded like a *li*-tripod, and a tall conical neck. Several *jia* of this same shape have been reported elsewhere in Henan (Zhengzhou, Kaifeng, Xinzheng) and at Panlongcheng, Hubei, but are usually dated to the Erligang period. The *jia* collected in Zone V has a flaring skirt, narrow waist, and flaring conical neck, also more akin to Erligang examples.

Like the looted *jia*, the single *ding* was recovered by Public Security after workers digging at a factory near Gedangtuo removed it from what probably was a grave. This context has not been dated, and it could be Erligang period. The single *he* vessel has been reproduced (Figure 1.12), but not yet reported. It evidently was collected in Zone III during 1985 with a *jue*.

Erlitou is the beginning of stereotyped ritual assemblages using bronze vessels and bronze ceremonial objects that may have been elite regalia. All four bronze types reported from Erlitou in fact persist into the Western Zhou period (1046–771 B.C.E.), as do the weapon forms. While these bronzes remain unique in their own time, they inspired imitations in neighboring cultures (see below). Whatever the identity of the Erlitou Culture, its contribution to bronze casting and ritual life was longstanding.

Hardstone and Jade Regalia

Working obdurate stone was an ancient craft by the early second millennium B.C.E. The minerals favored, called collectively jade (*yu*) in Chinese, are extremely hard, offer a wide range of colors from lustrous black to milky white, and take high surface polish. Significant episodes of working hardstones preceded Erlitou: for example, the Hongshan Culture of the Northeast (Liaoning, Inner Mongolia, Hebei) and the Liangzhu Culture of the Lower Yangzi. In each, a variety of minerals including nephrites (actinolite, tremolite, called “soft jade”) were used. These hardstones were worked in many regions during the Longshan Age, but on present evidence only the Liangzhu people found so many uses and left behind such high levels of craft.

The Longshan Cultures of North China (Shanxi, Henan) utilized limited quantities of jade and this frugality continues at Erlitou. Hardstones are found in about a dozen richly furnished graves of the more than 165 at the site, dating from periods II–IV. Most of these assemblages include bronze (bells, plaques, vessels, weapons) as well as turquoise, sometimes lacquer, cowrie shells, and layers of cinnabar in the base (see Figure 1.3). The few instances where jades have been found without bronze are all disturbed contexts where peasants had opened the find. There is no

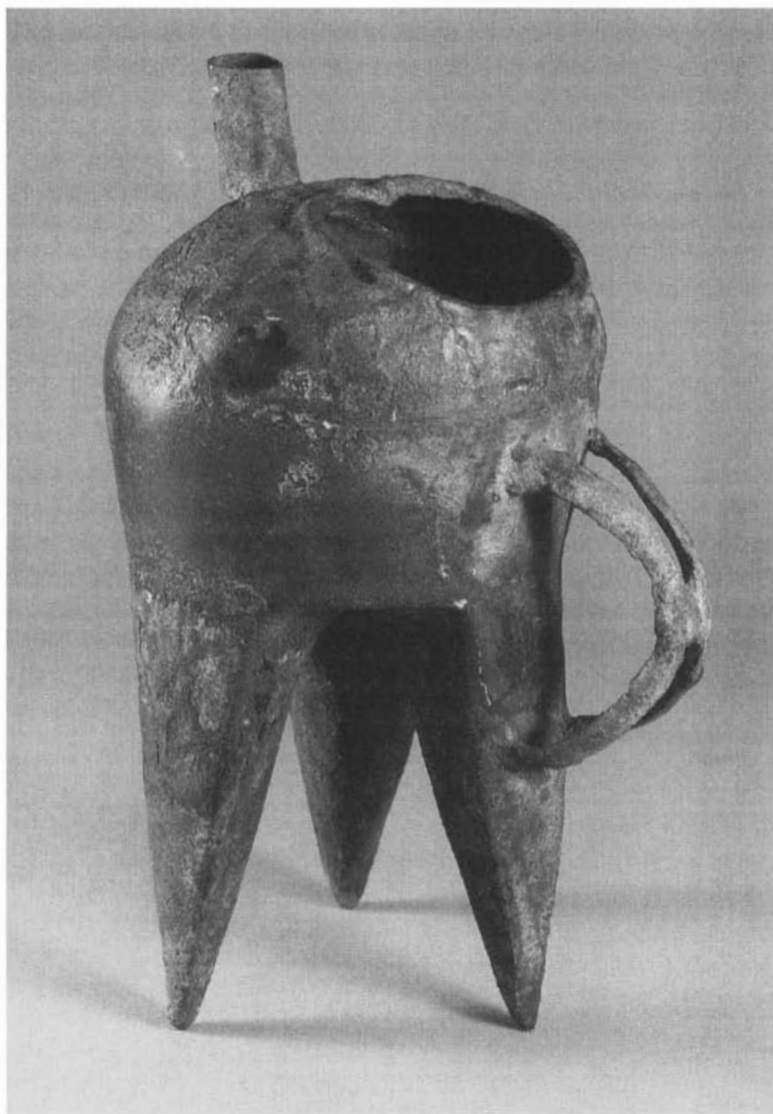


Figure 1.12. Bronze *he* tripod, Erlitou, Grave II:1, height 24.5 cm, period IV. *Wenwu jinghua* (1997), pl. 39.

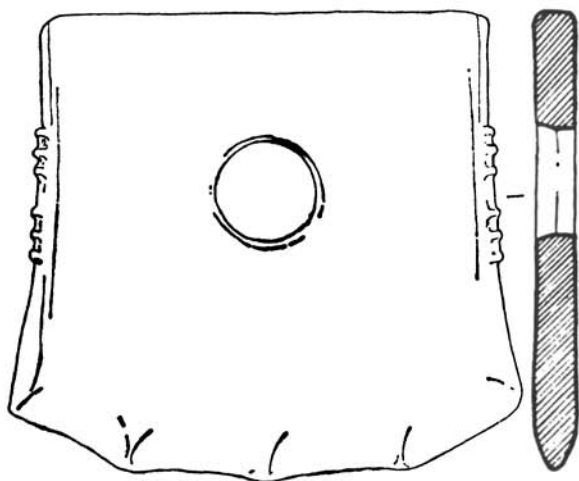


Figure 1.13. Jade *yue* axe, Erlitou, Grave V:6, width 23 cm, period IV. *Kaogu* 1984.1:38.

evidence yet for a workshop preparing hardstones. It may be that Erlitou was at the receiving end of an exchange network for these objects.

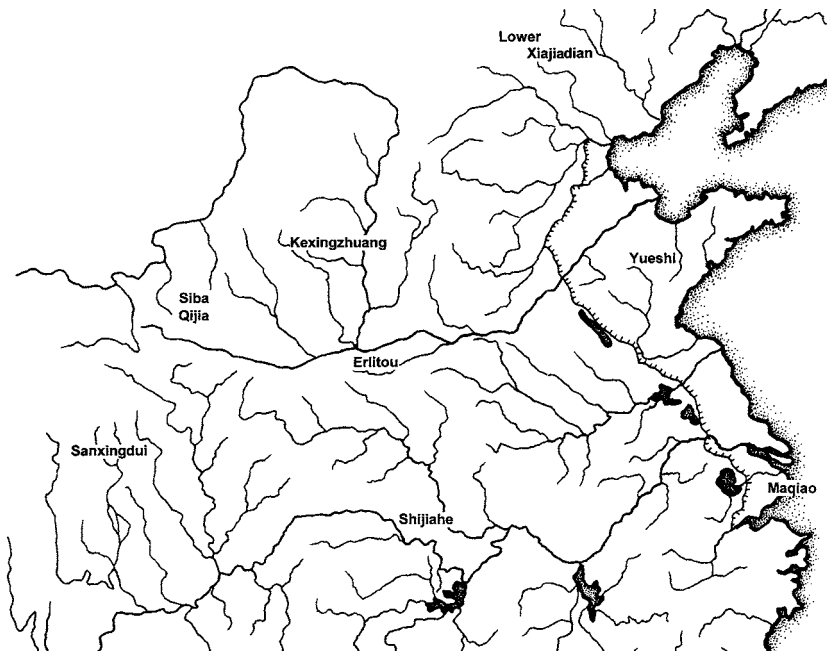
Most of the hardstones from Erlitou have in common their large size and likely function as ceremonial regalia (see Figure 1.13). Scepters (conventionally called *gui*, *chan*, *zhang*), flat axes (*yue*), dagger-axes (*ge*), and large knives comprise the majority. Flat blades with three to seven holes along their top edge range up to 65 cm in length, while *zhang* scepters reach 54 cm. All could have been hafted, either at right angles like a dagger axe or, in the case of the blades, along their top edge. Many pieces were given further work by scoring lines in their surface, and/or by notching edges. With the exception of *yue* axes, these forms are thin slices from the boulder and quite fragile. The careful placement of some examples—two *zhang* scepters on the chest of a skeleton, for example—is notable (see Figure 1.3).

However, the most ubiquitous of hardstones or jades are the so-called handle-shaped objects (*bingxing qi*), the actual use of which is unknown. This ad hoc designation comes from their smooth surfaces, like a grip, with a terminal knob, and an opposite end that could have been inserted into or attached to something else (see Figure 1.15a). Recovered from habitation strata and graves alike, this shape persists until the Late Shang period, when there is some evidence for its use in connection with ancestor rites (see Figure 3.20). One handle-shaped object from a disturbed period III burial was decorated with registers of eyed masks aligned at

the corners rendered in relief. The pointed sockets of the eyes echo a bronze plaque and motifs incised on pottery. This may be a source for the eyed masks that begin to appear on bronze vessels in the Erligang Culture. This object is now lost.

Contemporary Cultures and Interaction

The Erlitou site did not exist in a vacuum. It was part of a culture defined by related sites in western and central Henan, southern Shanxi and Hebei, and southeastern Shaanxi. Moreover, the people of Erlitou were in contact with near and far neighbors now classified as distinct archaeological cultures (Map 4). To the east, in modern Shandong and eastern Henan, the Yueshi Culture occupied much of the area once home to the Classic Longshan. To the north, at some distance, was the Lower Xiajiadian Culture of modern Liaoning, Inner Mongolia, Hebei, and Beijing. In this instance, some contact must have been especially intense, as an



Map 4. Cultures contemporary with Erlitou, type sites identified by their provinces: (a) Yueshi, Shandong; (b) Lower Xiajiadian, Inner Mongolia; (c) Kexingzhuang, Shaanxi; (d) Siba and Qijia, Gansu; (e) Sanxingdui, Sichuan; (f) Shijiahe, Hubei; (g) Maqiao, Shanghai.

examination of pottery vessels and painted decoration attest (see below). To the northwest were the Kexingzhuang Culture of Shaanxi and the Qijia and Siba Cultures of Gansu. The latter supplies the bulk of present evidence for metallurgy in the early second millennium B.C.E. However, this tradition differs in many respects from the contemporaneous bronze casting at Erlitou (see below). Along the Yangzi were contemporary cultures in Sichuan (Sanxingdui), Hubei (Shijiahe), Zhejiang (Haochuan), and modern Shanghai and its environs (Maqiao). Contact between Erlitou and the Sichuan basin is likely from the evidence of bronze and hardstone objects, but the timing and direction of exchange are debated. These contemporaneous cultures span five macroregions. Their possible interactions are best discussed in relation to four topics: settlements, hardstones, metallurgy, and ritual vessels.

Settlements

Evidence for settlements and regional hierarchies varies greatly in quantity and quality among the cultures listed above. Many important sites are known only from initial reports, and the only regions with systematic survey data in print are portions of Shandong and Inner Mongolia. It is often difficult to judge how long or how intensively sites were occupied. It may be that a number of Longshan Age walled sites in the Middle and Lower Yellow River drainage still flourished in the Erlitou period (for example, the Yueshi Culture occupation at Chengziyai). On the other hand, other sites were only inhabited to a limited degree (for example, the Erlitou period occupation at Wangchenggang). Regional survey and excavation programs constantly increase the total number of major and minor sites documented and the complexity of their regional patterning. Thus Erlitou, which now stands apart from all other sites of its own culture, may someday be connected to other centers in Henan, Shanxi (like Dongxiafeng), Hebei, or Shaanxi.

In Shandong, Hubei, Sichuan, and Inner Mongolia, walled sites of some size were occupied during the time of the Erlitou Culture. It would seem on present evidence that walled centers had not emerged in this period in the Lower Yangzi (Maqiao Culture) and Northwest (Kexingzhuang and Qijia Cultures) macroregions. There is little to be added to the general discussion of walled sites found in the Introduction, with the exception of sites of the Lower Xiajiadian Culture in Inner Mongolia. Along the Yingjin and Yin Rivers near Chifeng, for example, surveys in the 1960s revealed some forty-three sites on terraces and slopes 30–70 m above the river.²¹ These sites were closely distributed, with as many as twenty in one 20 km stretch of river, including three large sites. All were walled positions—either with stone construction or a

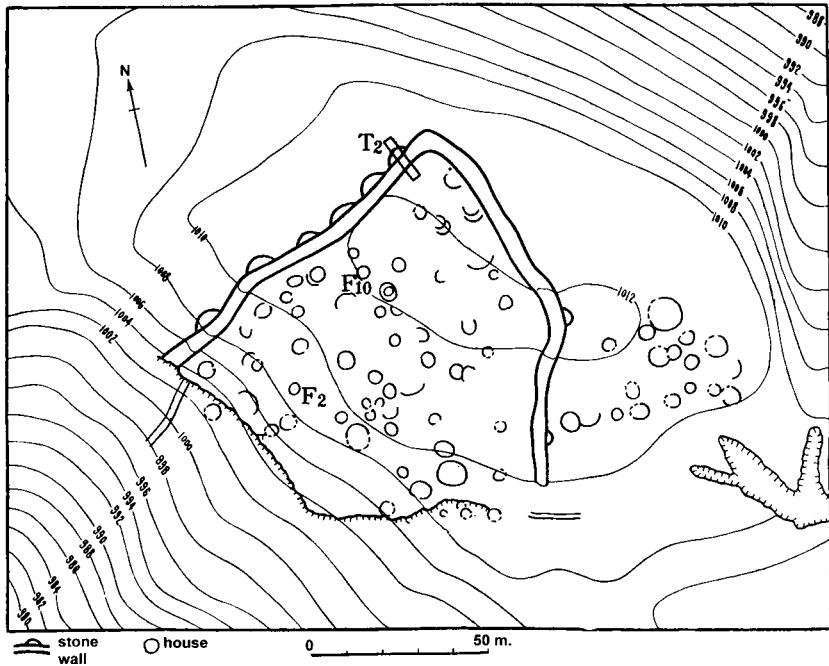


Figure 1.14. Xindian walled site, Chifeng, Inner Mongolia. Xu, *Zhongguo Kaoguxue* (1986), p. 83. This stone-walled site (*shi cheng*) occupies an area of a hectare with about sixty houses within the wall and another eighteen outside. The rubble walls that delimit the north and east form a V; the steep slopes on the south and west were not protected. The walls are as much as 4.8 m wide at the base with a height of 2.5 m. A pounded-earth core was faced with rubble on both sides. This site and others like it date c. 2300–1600 B.C.E., contemporary with Erlitou.

mix of earthen core and stone facing—and hence defensible settlements (Figure 1.14). The largest site was 100,000 sq m in area with an estimated 600 houses. Many sites were single component occupations of this culture, dating c. 2300–1600 B.C.E. Other tributaries of the same river system revealed similar settlement patterns when surveys were done in the 1990s. Chinese scholars regard individual sites as lineage or tribal settlements, and clusters as larger tribes or confederated units. The Lower Xiajiadian Culture marks the inception of stone wall building in China Proper and its margins.

Settlements patterns in several macroregions suggest two propositions. (1) A number of macroregions supported cultures with hierarchical settlement systems, an index of their population size and economic

and social-political organization. (2) Wall building in some areas suggests both a labor force that could be marshaled for such tasks, and a pressing need, presumably conflicts among neighbors. While some of these contemporary regional cultures may have posed a challenge to Erlitou, wall building was not a feature of this culture.

Hardstones

For a major center, the quantities of hardstones and jades at Erlitou are modest. It would seem either Erlitou was not a locus of working hardstones, or, as always, significant finds may remain undiscovered. By contrast, evidence for working hardstones in the Northwest and the Middle and Upper Yangzi macroregions stands out during this period. Hardstone blades (or scepters) akin to items found at Erlitou are plentiful in northern Shaanxi, especially Shenmu County, where several sites of the Kexingzhuang Culture yielded large quantities. The date of the Shimao site remains controversial; it produced about thirty “forked scepters” (*yazhang*), a type found in an Erlitou grave of period III and another period IV context (possibly a disturbed grave). More recent work at the Xinhua site in Shenmu uncovered a pit filled with some thirty hardstone blades placed on edge. In this case the excavators propose a date of Xia period, presumably contemporary with Erlitou.

The “forked scepter” is prominent among artifacts in the two pits at Sanxingdui (see Chapter 5), which postdate Erlitou. The scepters found in these remarkable deposits were made from a variety of stones, and can be sorted by shape and details into several subtypes, some very similar to the examples from Erlitou. Hence scholars debate whether jades found at Erlitou, which have chronological priority, represent a tradition continued later at Sanxingdui, or if in fact those Erlitou objects originally emanated from an earlier phase of activity at Sanxingdui, where there is actually evidence for jade working.²² Since about 150 forked scepters are now known from find spots spread across the map of China Proper (and another 75 reside in collections, mainly outside China), this topic will be debated for some time. The most significant concentration is the Chengdu basin, which might argue this was the center of their production. In this view, such objects then circulated over a wide area for a great length of time. On the other hand, the multiplicity of subtypes might argue for a tradition shared by several production centers.

Another hardstone tradition slightly earlier than Erlitou is documented in the Shijiahe Culture of Hubei. The Xiaojiawuji site, located a short distance south of the sizeable walled settlement (see Figure 0.2), included numerous urn burials.²³ More than 100 small jade carvings were recovered from sixteen of these burials, including several types with

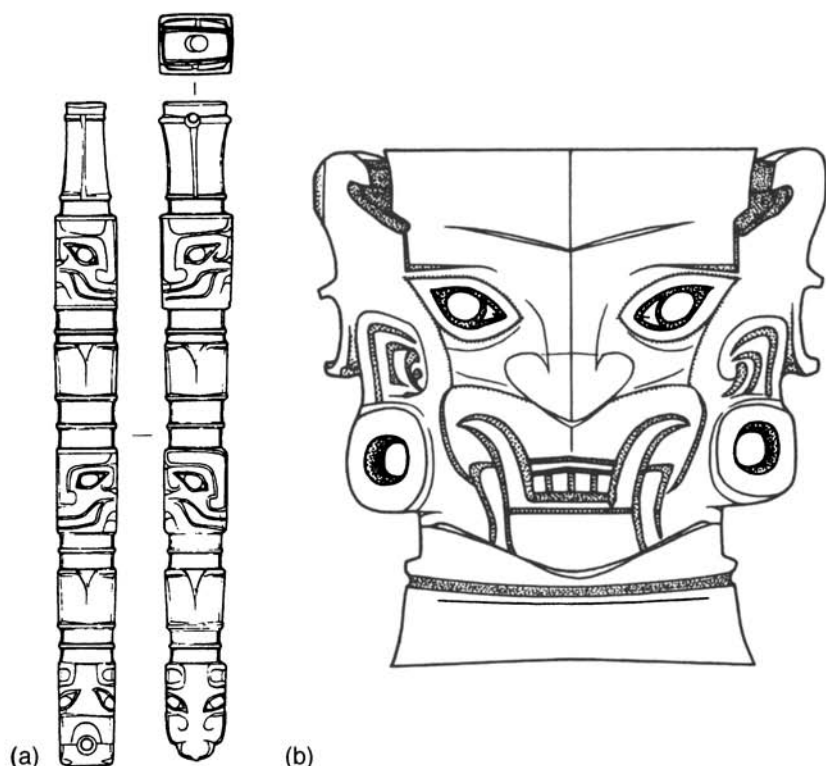


Figure 1.15. Jades, Erlitou and Shijiahe: (a) handle-shaped object, Grave V:4, Erlitou, length 17 cm, period III, *Yanshi Erlitou* (1999), p. 257; (b) mask, Shijiahe, Hubei, *Xiaojiauwuji* (1999), p. 316.

connections to Erlitou. Seven small heads, some human, others with barred fangs, have gained attention (Figure 1.15b). Tiger heads and cicadas also appear later in the Bronze Age; cicadas continue in fact until early Imperial times. Moreover, handle-shaped objects were found in these same urn burials. Several have registers that characterized at least one example from Erlitou.

Although some scholars have proposed “Jade Age” as the proper term for the Terminal Neolithic, this resource was not exploited equally, much less worked with equal skill, in all macroregions. The Henan Longshan Culture, directly antecedent to Erlitou, is among regional cultures that did not develop a sophisticated hardstone industry. In other regions, such as the Lower Yangzi, jade working apparently declined after c. 2000 B.C.E. The Maqiao Culture, which succeeded Liangzhu in the Shanghai

area, seems essentially bereft of hardstones. The Haochuan Culture of southwestern Zhejiang, in spite of some links to Liangzhu, is also much less rich in jades compared to the former. The sources of jades found at Erlitou were probably other macroregions: possibly the Northwest (Kexingzhuang), Upper Yangzi (Sanxingdui), or Middle Yangzi (Shiji-ahe). Turquoise, also found in some quantities at Erlitou, may well have emanated from Hubei, a fairly convenient location given the Han River system that links the Middle Yangzi and North China. As small, durable objects, hardstones were well suited to travel great distances. The wide distribution of forked scepters may be our best evidence so far for extensive circulation of hardstone objects. It appears likely that Erlitou, as a center of wealth and power, attracted various craft objects, rather than sustaining its own industry.

Metallurgy

Traces of metal have been documented in several Longshan Age cultures of North and Northwest China, from Shandong through Gansu. Small bronze objects are attested from Yueshi Culture levels (c. 2000–1600 B.C.E.), as well as Lower Xiajiadian Culture burials (c. 2300–1600 B.C.E.), for example at Dadianzi. But the most significant evidence for working metals is found in the Qijia and Siba Cultures of Gansu, which span the late third and early second millennia B.C.E.²⁴ Evidence from Qijia contexts is exclusively small objects: tools like blades, awls, adzes, chisels, and ornaments such as rings. The blades are reminiscent of finds at Erlitou and elsewhere. Qijia objects are both copper (96 percent pure) and bronze alloy (as much as 5 percent lead-tin). They were both cast and worked by hammering. The Huoshaogou cemetery (Siba Culture) yielded more than 200 items from 106 of its graves, about half copper and half bronze (Figure 1.16).²⁵ A tin-bronze alloy seems to have been preferred, and stone molds used for casting were found there. Few objects were hammered, and most were small ornaments.

The prominence of metal objects in these northwestern cultures, some predating Erlitou and some contemporary with it, prompt suggestions that Erlitou derived its knowledge of metallurgy from points west.²⁶ This remains an intriguing possibility. In evaluating it, we must keep in mind those features of Erlitou bronze casting that are distinctive. The alloy preferred at Erlitou by period IV was a mix of copper-tin-lead. The preferred method of fabrication was casting in ceramic molds. Small personal ornaments like rings were not made, but rather weapons and vessels. Those vessels, in turn, were carefully copied from local pottery types with established roots in periods I–II. With the exception of a single knife from Erlitou and the newly reported axe (see Figure 1.9b), no

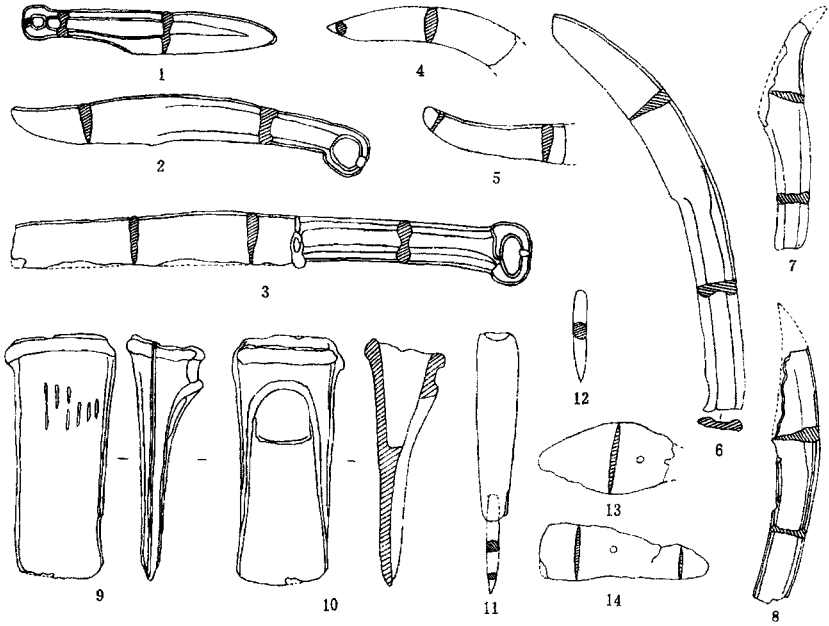


Figure 1.16. Metal artifacts, Siba sites, Gansu, Li and Shui, *Wenwu* 2000.3:37. Knives (nos. 1–8), some with ring pommels, range from 10 to 20 cm long. Scrapers (nos. 13–14) may have been attached to wood or bone handles. A bone grip is shown on the awl, no. 11. Two axe heads (nos. 9–10) complete this picture of representative types. These objects date c. 2000–1600 B.C.E., contemporary with Erlitou.

bronze objects found there as yet appear dependent on either metal working practices or prototypes from Northwestern cultures.

This generalization assumes that several bronze plaques with turquoise inlay found at the Sanxingdui site (not the sacrificial pits; see Chapter 5) were exported from Erlitou or copied after Erlitou prototypes. These objects have been reproduced but not reported, so important details remain cloudy. If they can be dated to levels or contexts contemporary with Erlitou, their provenance could be either Sanxingdui or Erlitou. Since such levels at Sanxingdui are presently very poorly documented, however, it appears more likely they were exports like the bronze ritual vessels, also found at Sanxingdui, which came from the Middle Yangzi. Perhaps Erlitou sent bronze plaques in exchange for hardstone forked scepters. It is premature to discuss exchange between Erlitou and Sanxingdui. Both sites were major centers, although not contemporaneously; both had relations with other neighbors near and far.

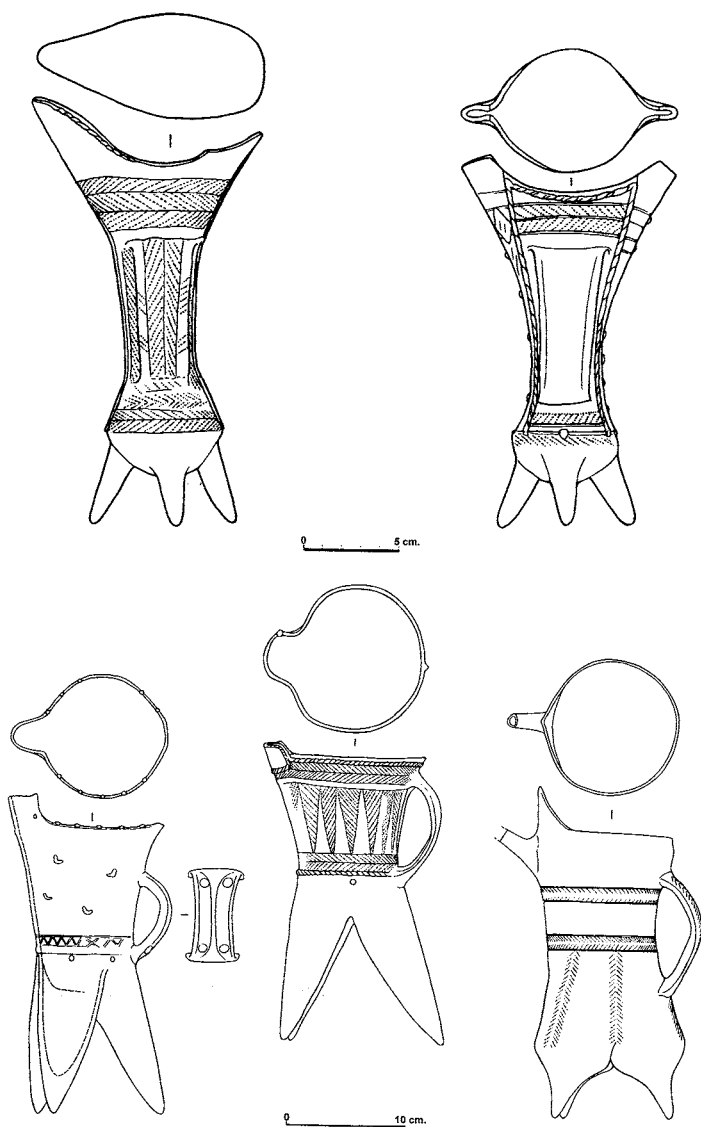


Figure 1.17. *Jue* (pouring cups) and *gui* (pitchers), Dadianzi, Chifeng, Inner Mongolia. *Dadianzi* (1996), pp. 84, 82.

Ritual Vessels

Explanations for similarities between distant cultures require a mechanism to link the two bodies of evidence. Small objects of course can be transmitted through space or time. Durable, portable objects have the greatest chance for survival in making such a journey, but value must accrue to them for someone to make the effort. Objects can be imitated by one culture after a model indigenous to another. This requires either that the model migrate, or that artisans (carrying it “in their heads”) themselves move. Here too a purpose must be served in the culture imitating another society. Tracing movements of people is difficult, whereas durable objects, especially if placed in graves, can be plotted on the map and across time quite easily.

The Dadianzi site near Chifeng, Inner Mongolia (Lower Xiajiadian Culture) offers a striking instance of imitation of its contemporary, the Erlitou.²⁷ The 800 graves excavated in the 1970s and 1980s held a large quantity of pottery. Of that sample, a small portion were gray ware vessels of the ritual types *gui*, *jue*, and *he* known from Erlitou. A dozen large graves accounted for these vessels, which were found as paired *gui* and *jue* (Figure 1.17) among other ceramics placed in niches. Although they have the characteristic shapes of Erlitou *gui* and *jue* (see Figure 1.6), both their clay and incised decoration mark them as local products. Unless we posit migration by a cohort of Erlitou potters, we must rely on emulation to explain these vessels. Dadianzi people could have gone to Henan or Erlitou pots may have been carried to Inner Mongolia, but still other contingencies might be imagined. Like hardstone forked scepters, acceptance of these vessels for burial furnishings by the Dadianzi people presupposes that some significance was attributed to them by this society. Further complicating matters is the widespread use of painted pottery decoration at this and other sites (Figure 1.18). The decoration emulates the eyed masks of the Erlitou bronze plaques. In this case, however, one could assume Dadianzi potters imitated durable bronze objects that circulated to Lower Xiajiadian sites.

The Search for the Xia

For most Chinese scholars, the Erlitou Culture represents the birth of civilization in the heartland of China Proper. This archaeological culture produced a major site with key attributes of a complex society: large-scale architecture, bronze metallurgy, a stratified social order, and elaborate rituals. Only writing is missing from a normative definition of civilization. Erlitou also represents the true beginnings of proper history for most Chinese scholars, because they identify its material traces as remains of



Figure 1.18. Painted pottery designs, Dadianzi. *Dadianzi* (1996), p. 105. Designs nos. 1–3 seem to represent masks with facial features (mouths, nostrils, eyes, brows, perhaps ears), although no. 3 is shown inverted. Designs nos. 4–6 display pairs of slanting eyes; compare the eyes on the base of the bronze standing figure from Sanxingdui (Figure 5.20).

the first of the "Three Dynasties," the Xia (Box 7). Properly positioned in both time and space, the Erlitou Culture as Xia marks the successful merging of traditional historiography and modern archaeology.

Chinese sources for constructing ancient history are a combination of early inscriptions and received texts. Until the twentieth century, the origins of Chinese civilization were known primarily from chronicles and histories, of which the most influential was the *Historical Records*

Box 7 Myths of the Xia

If it had not been for Yu, we would just be fishes.
(*Zuo Commentary*, Duke Zhao 1)

According to *Historical Records* (c. 100 B.C.E.), the founders of the "Three Dynasties" were descended from the Yellow Emperor (Huang Di), first of the "Five Emperors" with whom Sima Qian begins his history (Box 3). Yu, founder of Xia, is linked to Huang Di through the gods Zhuanxu and Di Ku, and his own father Gun, a would-be savior who failed to control the flood waters. References to Gun appear in the "Heavenly Questions" of the *Songs of the South* and the *Classic of Mountains and Seas* (both late Zhou works edited in Han times). Gun was put to death for stealing magical soil from the gods. His body did not, however, decompose, and instead, miraculously, his son Yu emerged from it.

Sima Qian depicts Yu as an official of the sage ruler Yao (fourth of the Five Emperors), and a contemporary of both Xie, founder of the Shang, and Hou Ji, founder of the Zhou. Yu's greatest exploit was to control the flood waters where his own father had failed. His achievements are summarized in the *Book of Documents*, alluded to in the *Book of Songs*, and widely cited by late Zhou texts. A detailed account appears in the *Annals of Lü Buwei* (c. 239 B.C.E.):

When Yu went east as far as the region of the Leaning Tree, the sun was rising over Nine Fords and the plains of Qingqiang, a place where the trees are densely clustered and where the mountains brush against the sky. He went through the districts of Bird Valley, Green Mound, through the Land of the Black-Teeth. He went south as far as the Lands of Crossed Toes, Sunpu, and Xuman, and the mountains of Nine Brilliances with their cinnabar grain, lac trees, and seething rivers that rush and roar. He went to the regions of the Feathered Men and Naked People, and the district of Never Die. He went west as far as the Land of the Three Perils, below Mount Shaman, to the people who drink dew and sip air, to the Banked Gold Mountain, to the districts of the Odd Arm and the One Arm Three Face. He

went north as far as the Land of Rencheng, and near Xiahui, to the top of Heng Mountain, to the Land of Dogfight, to the wilds of Kuafu, to the place of Yuqiang with its immense rivers and mountains of massive rocks. There was nowhere he neglected to travel. He was anxious for the black-haired people. His face became pitch black, his bodily orifices and his vital organs did not function properly, his steps were faltering. As a result, he sought out wise men, for he wished to discover everything about the advantages of these lands. It was a laborious task. (Anne Birrell, *Chinese Mythology: An Introduction* [Baltimore: Johns Hopkins University Press, 1993], p. 83)

Most of the "Basic Annals of Xia" from *Historical Records* are devoted to a condensation of the "Tribute of Yu" (Yu gong), the survey of the nine regions of the world as described above, their distinctive landmarks, products, and peoples (also found in the *Book of Documents*). A few mythic traditions are ascribed to Yu's son, Qi, and to a later Xia ruler, Kongjia. However, most of the sixteen generations of Xia kings are passed over with a formulaic "when X passed away, Y was enthroned." The last ruler, Jie, is universally depicted in late Zhou texts as a despicable figure whose vices and misdeeds warranted his harsh fate.

Jie committed more and more wrongdoing and transgressed the right way of the ruler, bringing harm and destruction to his country and his people. So Tang, in anxious concern for the stability of the empire, ordered Yi Yin to go and observe the mighty Xia. But he was afraid that the Xia would not trust him, so Tang personally shot at Yi Yin, and then Yi Yin fled to the Xia. Three years later, he returned and reported in Bo, the Yin [Shang] capital. He said, "Jie used to be bewitched by Moxi, and now he is in love with Wan and Yan. He shows no pity toward the masses, and the will of the people is that they won't endure it. Everyone from the top level of society to the bottom loathes him. The people's hearts are full of resentment and they all say, 'Unless Heaven up above is without pity, the days of Xia will come to an end.'" Tang said to Yi Yin, "What you tell me about the mighty Xia is just what I want." Tang swore an oath with Yi Yin to show that they would destroy the Xia. Yi Yin went back again to observe the situation in mighty Xia and learn what Moxi had to tell him. (Birrell, p. 257)

(*Shi jì*) of Sima Qian (c. 100 B.C.E.; Box 3). This account synthesized a variety of sources and imposed a strong pattern onto its lists of kings so that the legitimate transmission of authority could be documented. Sima Qian's chapter on the Xia consists primarily of a lineage of its kings, with some embellishments. The second primary source of knowledge about antiquity prior to 1900 was a pair of so-called Confucian Classics: the *Book of Documents* (*Shu jing*) and *Book of Songs* (*Shi jing*). These texts were transmitted from ancient times in competing recensions.

Critical scholars in late Imperial times determined the probable age of their parts. None of the *Documents* or *Songs* is today regarded as any earlier than the Western Zhou period (c. 1046–771 B.C.E.). The earliest references to a Xia polity are found in the former, albeit in Zhou propaganda justifying their taking power from the Shang.

Bronze inscriptions have been known in China since very ancient times, and became a focus of antiquarian interest in the medieval period. The first great age of collecting and exegesis was the Northern Song (960–1126), a scholarly pursuit that flourished again in the Qing (1644–1912). Bronze inscriptions unfortunately offer little of substance before the end of Shang and early Western Zhou, when long texts first appear. And no bronze inscriptions mention a Xia state, king, or people. With the recovery of the oracle-bone inscriptions, actual texts of an earlier age came into the hands of epigraphers and historians (see Chapters 3–4). Their inception cannot, however, be dated any earlier than the reign of Wu Ding, c. 1200 B.C.E. And like bronze texts, no references to the Xia have as yet been discovered in this massive corpus.

The dates of these four sources demonstrate an inverse relationship to their information about the Xia. The oldest sources, oracle-bone and bronze texts, contain no data about Xia, although they are closest in date to that period. The classics offer minimal references within tendentious rhetoric. Only the latest source, the synthesizing Han scribe, offers a fleshed-out lineage, a kind of bare-bones chronicle. Thus, in spite of the pleasing fit between the expectations of traditional history and the time-space coordinates of the Erlitou Culture, there remains a notable lack of corroborating evidence that a Xia state, or people, or culture even existed.

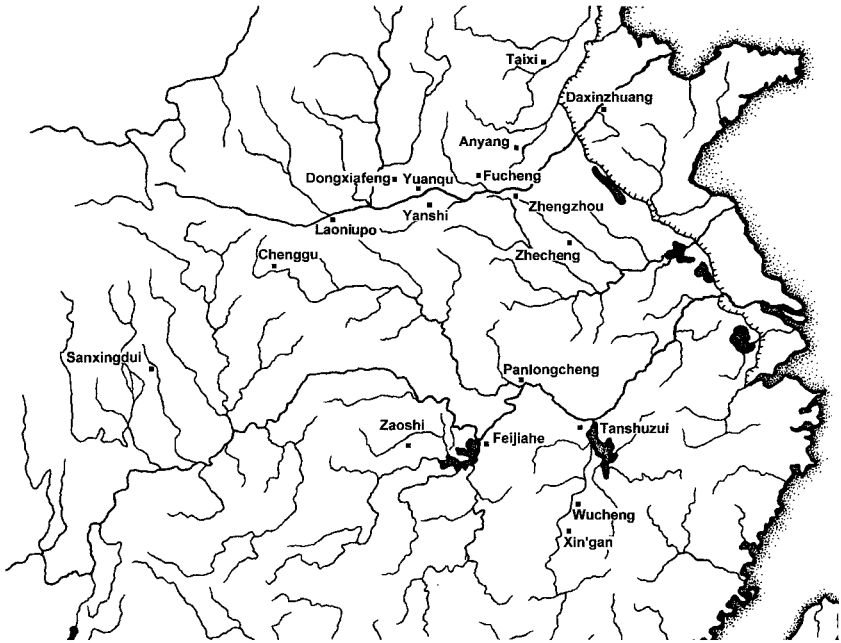
Chapter 2

Foundations of the Bronze Age: The Erligang Culture (c. 1600–1300 B.C.E.)

If Erlitou witnessed the dawn of the Bronze Age in North China, then the far more extensive Erligang Culture represents its broad foundations. The material evidence documented at sites of this archaeological culture (Map 5) underlies the civilization with which Chinese history properly begins, and also constitutes the baseline for developments outside the central plains. Since its discovery in the early 1950s at Zhengzhou (Henan), the Erligang Culture has been interpreted as the direct predecessor of the historic Shang culture known from Anyang (see Chapters 3–4). Chinese scholars generally assume Zhengzhou itself was a capital occupied by the same lineage of Shang kings who later established themselves near Anyang. Thus in historical discourse, the Erligang Culture has been defined as “Early Shang” (Table 2.1). While its roots were once seen to lie further west near Luoyang with Erlitou, recent scholarship has moved away from that view. Now, most scholars assume Shang culture developed instead from roots in eastern and northern Henan and southern Hebei.

A Network of Sites

During the mid-second millennium B.C.E., one (or more) early states emerged in the North China macroregion and, over time, occupied several large, walled centers (*du*, “capitals”). Foremost among these large sites are the Erligang period walls at Zhengzhou and Yanshi. A slightly larger number of lesser walled sites are also known, most probably either satellites of powerful kings ruled by local lords or citadels established to guard specific territory or resources. These fortified sites are found in two directions from Zhengzhou and Yanshi: far south near the Yangzi River at Panlongcheng (Huangpi, now Wuhan, Hubei), and west across the Yellow River at Fucheng (Jiaozuo, Henan), Gucheng



Map 5. Erligang period sites, ordered by province, with site name and county or city: (1) Henan: Erligang and Xiaoshuangqiao, Zhengzhou; Shang cheng, Yanshi; Fucheng, Jiaozuo; Mengzhuang, Zhecheng; (2) Shandong: Daxinzhuang, Jinan; (3) Hebei: Taixi, Gaocheng; (4) Shanxi: Gucheng, Yuanqu; Dongxiangfeng, Xi'xian; (5) Shaanxi: Laoniupo, Xi'an; Baoshan, Chenggu; (6) Sichuan: Sanxingdui, Guanghan; (7) Hubei: Panlongcheng, Wuhan; (8) Hunan: Zaoshi, Shimen; Feijiahe, Yueyang; (9) Jiangxi: Tanshuzui, Tongling; Wucheng, Zhangshu; Dayangzhou, Xin'gan.

(Yuanqu, Shanxi), and Dongxiangfeng (Xi'xian, Shanxi). Within the region, a much larger number of nuclear settlements (*yi*) stretched across the landscape, populated by elite warriors and the laborers, both artisans and farmers, whose crafts and crops sustained society. Settlements (such as Mengzhuang in eastern Henan or Taixi in central Hebei) are less conspicuous in the current archaeological record than their probable numbers would require. However, the one-time existence of additional settlements is indicated by elite burials that dot the North China macroregion and adjacent zones. While some regional settlement surveys have been carried out (notably around the Yi-Luo Rivers and Anyang), for the most part it is difficult to situate these several kinds of sites in regional hierarchies. Their size and features do suggest, crudely, possible status and function (Table 2.2).

TABLE 2.1. Archaeological Cultures and Periods

This sequence of archaeological cultures may recapitulate the growth and development of Shang culture in Henan as a whole, although the relationship between the Erlitou and Erligang Cultures remains problematic and most Chinese scholars equate Erlitou instead with the Xia. The majority of these periods are represented, if only slightly, at the two longest-lived Henan site complexes, Zhengzhou and Anyang.

<i>Erlitou</i> Type site: Yanshi, Henan Periods I–IV	1900–1500 B.C.E.
<i>Erligang [Early Shang]</i> Type site: Zhengzhou, Henan Lower I–II Upper I–II	1600–1300 B.C.E.
<i>Huan-bei [Middle Shang, Transitional]</i> Type Site: Huayuanzhuang, Anyang Henan I–III	1300–1200 B.C.E.
<i>Yinxu [Late Shang]</i> Type site: Anyang, Henan Yinxu I–IV	1250–1050 B.C.E.

TABLE 2.2. Erligang Period Walled Sites

Region	Site	Area (hectares)	Wall dimen. (NS × EW)	Source
North	Zhengzhou			
	Inner	300	1870 × 1700	ZZSC
	Outer	1300		KG 04.3
	Yanshi	200	1700 × 1215	KG 84.6
	Huan-bei	400	2000 × 2000	KG 03.5
	Fucheng	7.8	280 × 280	KX 00.4
	Yuanqu	13	396 × 400	YQSC
	Dongxiafeng	—	— × 370	DXF
Middle Yangzi	Panlongcheng	7.5	290 × 260	PLC
Upper Yangzi	Sanxingdui	350	2000 × 1800	Sun

Sources: Henan Institute, *Zhengzhou Shang cheng* (2001), p. 178; History Museum, *Yuanqu Shang cheng* (1996), p. 14; Institute of Archaeology, *Xiaxian Dongxiafeng* (1988), p. 148; Hubei Institute, *Panlongcheng* (2001), p. 14; Sun Hua, *Sichuan pendu de qingtong shidai* (1999), p. 163.

Walled Capitals (*du*)

When an elementary school teacher named Han Weizhou found pottery sherds and polished stones on a mound southeast of the old city wall at Zhengzhou (Fig. 2.1a), in fall 1950, he unknowingly initiated the discovery of the source of the culture of Anyang.¹ After investigations in

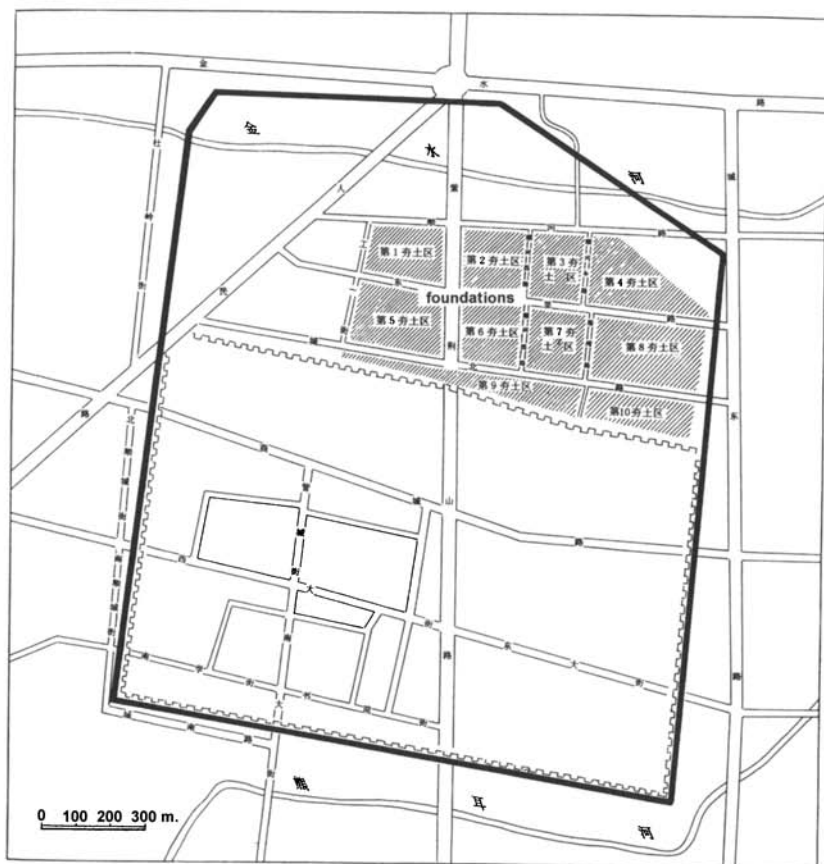


Figure 2.1. Erligang period walls at Zhengzhou: (a) inner wall, *Zhengzhou Shang cheng* (2001), p. 231; (b) outer wall, *Kaogu* 2004.3:40. Portions of the outer wall were encountered as early as 1953–54, but not then understood as such. Between 1986 and 1992 (shown by numbered triangles along the bold line) additional segments were uncovered, and the semblance of a lengthy wall embracing the southern flanks of the Erligang walled settlement emerged. One section about 700 m west of the latter was measured at 900 m long and about 16 m wide.

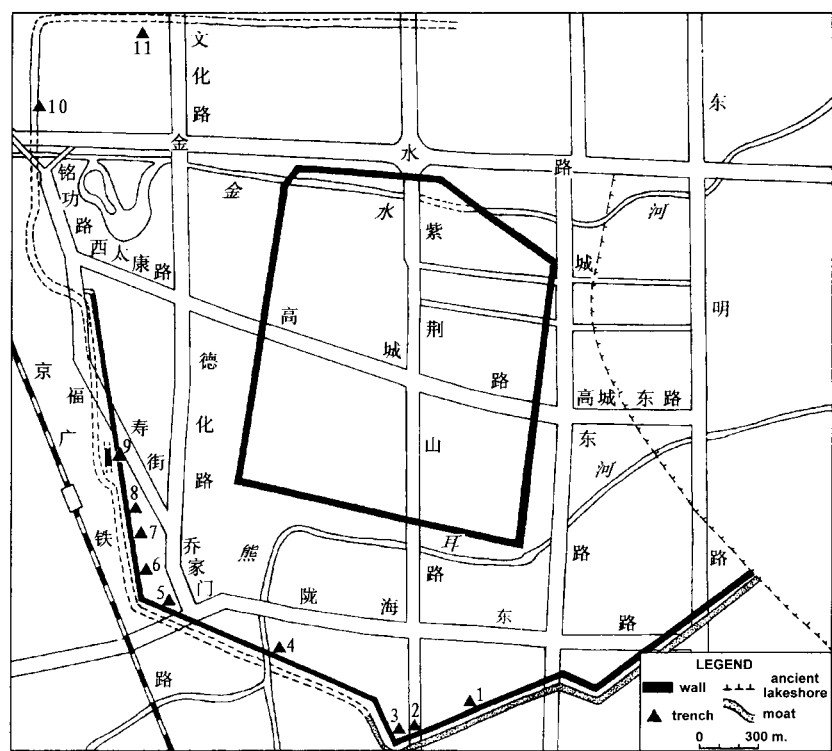


Figure 2.1. (continued)

1952–53, local archaeologists determined the teacher’s finds were indeed datable to the Shang period. Additional work around the Erligang mound yielded evidence sufficient to allow Zou Heng, then a Peking University graduate student, to construct a ceramic seriation that, with other data, linked the cultures of Zhengzhou and Anyang. Zou’s analysis remains fundamental to these assertions, as does the formal report of the type site published in 1959 by Henan archaeologists. Discovery of the Shang wall first came in 1955 near Baijiazhuang, in the northeastern part of the modern city. Later probing revealed that this wall was nearly 7 km in total length. Although definitive dating was not established until the 1970s, local scholars pounced on this evidence. An Jinhuai, the grandfather of Henan archaeology and principal excavator of Shang sites at Zhengzhou, proposed as early as 1961 that the Erligang period settlement was the capital Ao (or Xiao), known from Sima Qian and a variety of commentaries. That identification has waxed and waned in

popularity, but presently enjoys considerable acceptance. If An's hypothesis is confirmed, Zhengzhou would be the seat of the Shang king Zhongding, and the second dynastic capital. Unlike Anyang and Erlitou, the Zhengzhou sites remained under the control of provincial archaeologists, now organized as the Henan Cultural Relics and Archaeology Institute. Additional work in the early 1990s identified an "outer wall" (Figure 2.1b) at a considerable distance from the main Shang wall, tracking a less regular course for several kilometers on the south and west sides of the Shang city. This wall, which was first noted in the early 1950s, seems to delimit the maximum extent of Erligang sites in the Zhengzhou area. Recent analysis of these findings has led to a redating of both walls at Zhengzhou to the Luodamiao period (equivalent to late Erlitou). In other words, both walls were in place at the beginning of the Erligang period, the inner wall being slightly earlier.²

A second large-scale walled site came to light in the early 1980s, when the Henan Team of the Institute of Archaeology was asked to probe an area west of the Yanshi city prior to construction of an electric power plant.³ The ancient wall here was covered with sediments 1–4 m deep, outflow from the Mang Mountains on the north, and was bounded on the south by the present-day course of the Luo River. (The Erlitou type site is 6 km west of the Yanshi wall on the south bank of the Luo.) The site was largely unoccupied and undamaged, except for fields of winter wheat and Shixiang ditch, a channel cut in the Han-Wei period (third century C.E.) that runs through the center of the walled area from west to east. Although the overall north-south dimension of the Yanshi wall is comparable to that at Zhengzhou, its total area is about one-third smaller. None of the wall survived to any great height, nor were segments visible on the surface. On the other hand, survey and excavation here are not impeded by a modern city's streets and buildings. The historical associations of the Yanshi area were with Bo, the capital of the Shang founder, Cheng Tang. The archaeological dating of the site proved difficult for many years, but a recent consensus places construction of this wall in the early part of Yanshi period II, equivalent to the Lower Erligang period at Zhengzhou (see Table 2.1).⁴

Each site boasts impressive scale, both in the area enclosed and in the dimensions of the walls. The Yanshi site evidently grew in two stages. An early (Yanshi period I) compound encloses the heart of the site, its west wall running about 1,100 m north-south and the south wall about 740 m east-west (Fig. 2.2). The city was then expanded in period II by extending the west wall another 600 m northward (for a total length of 1,700+ m), and by creating a new north wall of 1,215 m running east-west. The east wall extension starts from the original east wall, moves northeast at almost a 45-degree angle, and then turns north. At

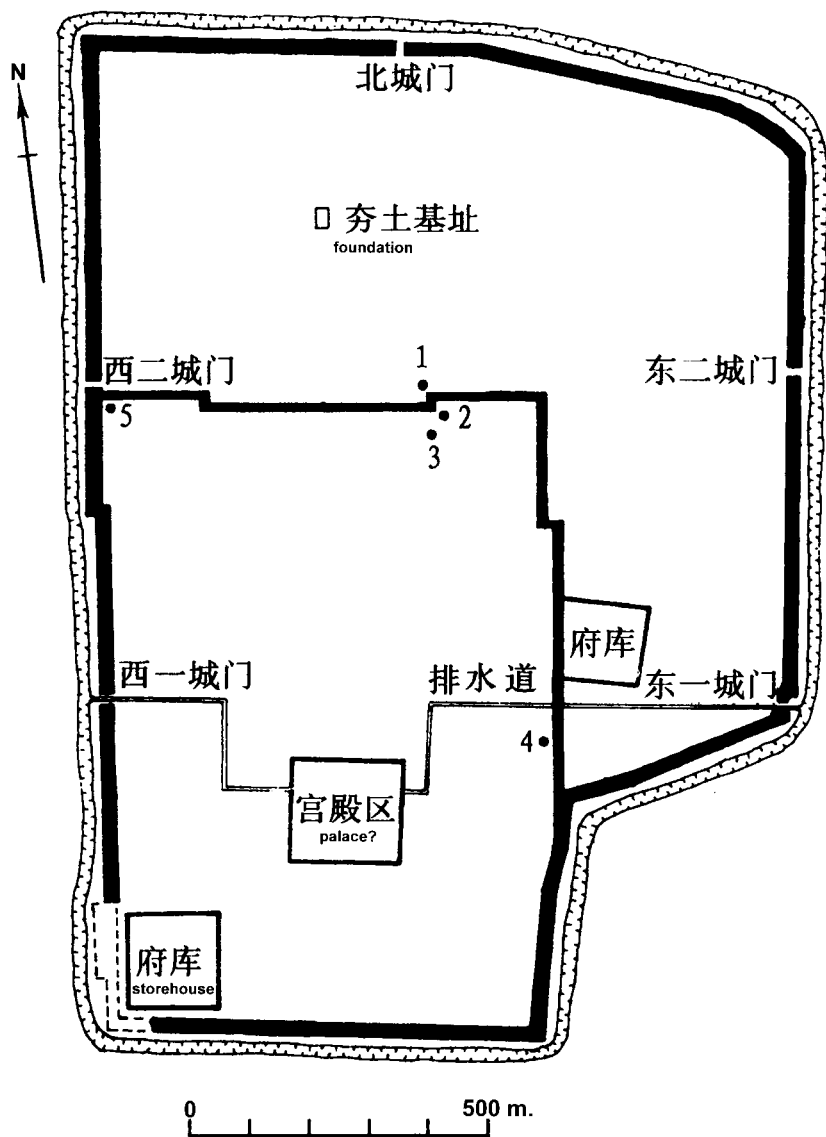


Figure 2.2. Plan of the Erligang period wall, Yanshi. *Kaogu* 1999.2:1.

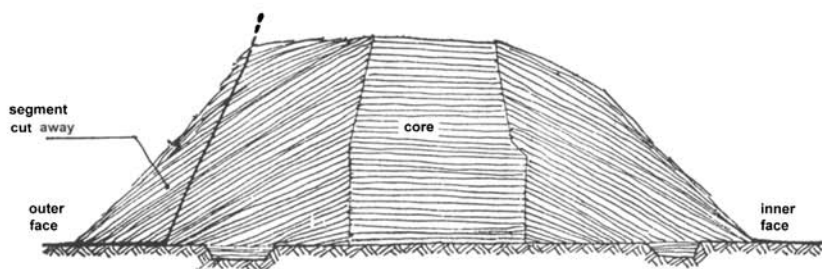


Figure 2.3. Cross-section of Zhengzhou wall, rendering by Yang Hongxun. Yang, *Jianzhu lishi yu lilun* (1984), p. 29.

Zhengzhou (see Figure 2.1a), the wall runs for 6,960 m, scribing an irregular rectangle longer north-south (1,700 and 1,870 m) than east-west (1,690 and 1,700 m). The orientation of the north-south walls is some degrees east of north, a siting similar to Yanshi (7 degrees east) and Huanbei (13 degrees east; see Box 13). East, south, and west walls are straight with sharp, right-angle turns at the southeast and southwest corners. Only the north wall is irregular, running in two segments on different alignments with the result that the northeast corner is further south than the northwest. The newly identified Huanbei city wall (see Figure 3.5) is larger still at 2 km per side, and so far appears to have a simple square plan without the irregularities of the other two sites.

In wall construction and design, these three sites seem largely comparable. In each case, walls rise from trenches cut below the original ground level, although their depth varies (Figure 2.3). Fill of hard pounded earth was laid as incremental, level layers until the height of the wall was reached (Box 8). This wall core was constructed in segments between wooden frames. After the lower levels of this core were in place, sloping layers of pounded earth were laid against them at an angle, typically steep on the exterior but more gradual inside. These slopes supported the core and protected it from weather damage. Usually they are covered with a layer of caliche (calcium carbonate endemic to loess terrain). The Yanshi wall varied in dimension: the early wall had a shallow trench and width of only 6–7 m, while the later wall was significantly thicker, about 16–25 m, with some passages even wider. Wall heights of as much as 3 m survive at Yanshi, but most of the wall may have been shaved down. At Zhengzhou, base dimensions are similarly large, averaging around 20 m, but preserved heights were much greater, the maximum being about 9 m. With outer and inner sloping segments, the Zhengzhou wall could be as much as 40 m thick.

Box 8 *Hangtu*: Building with Pounded Earth

In the loess lands of the North and Northwest macroregions, fine particle, aeolian soils may reach incredible depths. The soil cleaves cleanly, creating vertical exposures that generally hold their profile. Cave homes (*yaodong*) have been dug into these cliffs since Neolithic times, and peasants today continue to dig them. The Dongxiafeng (Shanxi) site had cave dwellings along man-made ditches within the Erligang period wall.

Reliance on ramming this soil in ancient times is documented by *The Book of Songs*, in a poem that describes construction of the new Zhou capital (no. 237):

*They tilted in the earth with a rattling,
They pounded it with a dull thud,
They beat the walls with a loud clang,
They pared and chiseled them with a faint ping, ping.*

(Arthur T. Waley, *The Book of Songs: The Ancient Chinese Classic of Poetry* [1937; New York: Grove Press, 1996], p. 233)

The “dull thud” of this text surely evokes the sound of the pounding tools as workers tamped the loose soil. The same techniques are used even today by peasants (Figure 2.4).

Had they been better versed in rural life or thinking of the *Songs*, the archaeologists who began work at Anyang might have realized more readily what they encountered. In trenches north of Xiaotun, they came upon hard-packed soil, which initially was interpreted as flood deposits. As the excavators expanded their trenches, they gradually realized that these deposits actually had regular, straight edges, right-angle corners, and uniform layers. In some cases, the archaeologists also found quantities of river cobbles on the surface. Occasionally the cobbles were placed at regular intervals in straight lines. Assembling this piecemeal evidence, in 1933 Guo Baojun published the now obvious correction: these were pounded-earth foundation blocks. Guo and his colleagues adopted the local Anyang expression for rammed earth: *hangtu*. By the time the Anyang excavations came to a close, it was understood that the Shang used this technique for constructing building platforms and strengthening the walls of royal tombs, as well as compacting the fill of tombs.



Figure 2.4. Peasants pounding earth, Qian County, Shaanxi. Courtesy Karen L. Brock.

In creating a pounded earth wall or foundation, wooden frames are required to hold the loose soil. Both the vertical uprights and the horizontal timbers leave impressions on the soil within. By continually raising the horizontal timbers, the foundation or wall rises steadily from its base. A few centimeters of loose soil dumped into the area bounded by the frames was tamped hard using a bundle of sticks. The ends of these sticks likewise leave their impressions as pockmarks on the surface of each layer. The basket loads of soil for this purpose are generally fairly clean, although pottery sherds and some other debris may be trapped in the layers. When present, such sherds are a key element in dating construction.

Each site was a notable presence upon the landscape enclosing a large area, the result of immense investments of human labor. A moat surrounded the Yanshi wall, and at least part of the Zhengzhou site. Proper gates have been reported only from Yanshi. These were narrow passages suitable for foot traffic (Figure 2.5). Very little of a road grid has survived at either site, with the exception of a few stretches of hardened “road surface” reported near gates at Yanshi. Inner walls also are poorly known. The original north and east walls at Yanshi were reduced to ground level when that city was expanded. Fairly thin walls (2–3 m wide) surround the several compounds with foundations at this site, and

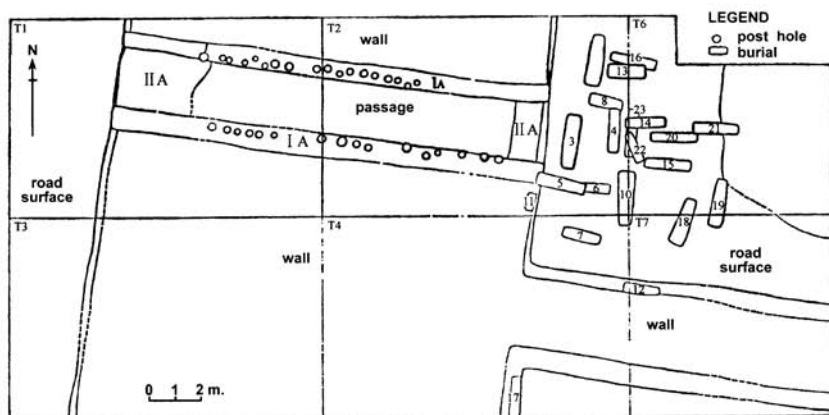


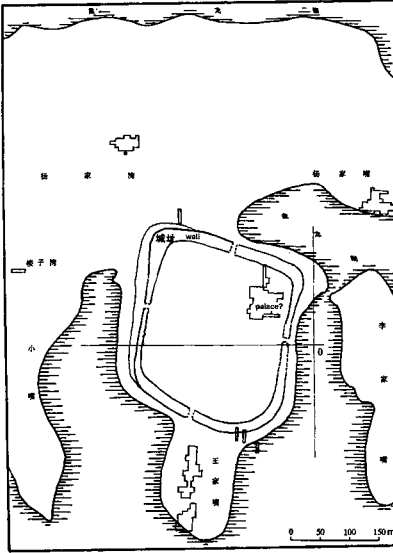
Figure 2.5. Plan of west gate no. 2, Yanshi wall, passage length 16.5 m, width 2.3 m. *Yanshi Shang cheng* (2004), p. 468.

evidence for a palace district wall is also reported from Zhengzhou. Within these walls are the most impressive remains: large pounded earth foundations of buildings that served as palaces, temples, or storehouses. Such functional types are keys, along with sheer scale, to accepting Yan-shi, Zhengzhou, and Huan-bei as likely capitals.

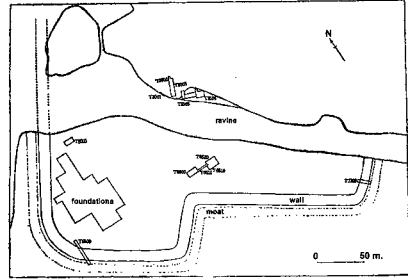
Satellites or Citadels

A second type of walled site is more common to the Erligang Culture. This type is characterized by small, single-walled compounds of square plan, and a cluster of foundations inside the walls. The first example to be reported was north of Wuhan, Hubei, on the shores of a lake and small tributary of the Yangzi River. Named Panlongcheng (“coiled dragon wall”), this site was worked initially in the 1960s and 1970s, and again over the 1980s and 1990s.⁵ It is now protected on the national register and a site museum is under construction. Surface survey yielded dimensions of 290 m north-south by 260 m east-west (Figure 2.6a), oriented 20 degrees east of north. Portions of the west and south walls were still standing 2–3 m high, and trenches revealed construction akin to Zhengzhou, the only other site known for comparison at the time. Walls ranged from 18–45 m in width at their bases. A moat 11 m wide and 4 m deep surrounded the site, and gaps in the walls on each side may have been gates. Timbers found in the moat suggest docks for water-borne cargoes. A raised platform in the northeast corner of this walled area measured about 100 × 60 m, and carried foundations arrayed in parallel (discussed below). Panlongcheng flourished in the Upper Erligang period, and may represent a short occupation at that. Its discovery stimulated discussions of how an early Shang state may have expanded during the Erligang period.

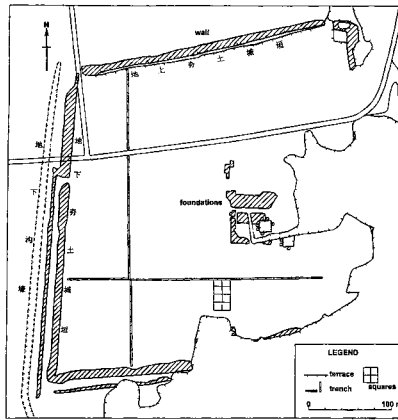
Two additional sites in Shanxi province have since been reported. The first, Dongxiafeng (Xiaxian, Shanxi), is only partially preserved due to erosion.⁶ Occupied initially by a regional type of the Erlitou Culture, this locality straddles deep natural ravines. Man-made ditches have cave dwellings cut into their walls. The Erligang period wall encloses only the southern part of the site (Figure 2.6b); the remains of its east and west walls (running north-south) lie about 370 m apart. The walls are substantial at 7–8 m thick, including protective inner and outer slopes, 1–2 m high. Since the ravine that cuts across the north has been present from early times, the Erligang wall may never have completed a square, but the literature is silent on this possibility. A large number of round surface houses occupy the southwest portion of the walled area, built to a common plan and neatly arrayed. One wonders if this was a garrison protecting the region or working a local resource (copper ore from the mountains?).



(a)



(b)



(c)

Figure 2.6. Erligang period walled sites: (a) Panlongcheng, Huangpi, Hubei, *Panlongcheng* (2001), p. 8; (b) Dongxiafeng, Xiaxian, Shanxi, *Xiaxian Dongxiafeng* (1989), p. 149; (c) Gucheng, Yuanqu, Shanxi, *Wenwu* 1997.12:5.

Overlooking the Yellow River near an ancient ford, the Gucheng site in Yuanqu County, Shanxi is substantially better preserved (see Figure 2.6c).⁷ Here the walled site occupies the edge of a terrace some 50 m above the flood plain of the Huang near the convergence of two tributaries. North and west walls are in good condition, the former visible on the surface. A portion of the northeast corner and fragments along the terrace edge south of it suggest a wall enclosed the east margin and connected to the fragmentary south wall. The dimensions are 338 m across the north and 395 m on the west. The estimated dimensions on the east and south are 336 m and 400 m, respectively. These walls would enclose about 13 hectares, an area 1/23 of Zhengzhou. (The Dongxiafeng site, if originally an enclosed square, was comparable.) A cluster of six foundations occupies the center of the site, but none has been described yet. The unique feature of Gucheng is the presence of parallel walls on the south and west, in the latter case creating a corridor leading to a gate. (The west side also revealed evidence for a moat.) These are assumed to be defensive assets, and Gucheng could be another garrison or citadel. It is one of four contemporaneous sites along an east-west line extending from Zhengzhou to Yanshi to Gucheng to Dongxiafeng (see Map 5) at intervals of 60–90 km.

A final wall is the newly reported Fucheng site in Jiaozuo, Henan, north of the Yellow River near the Taihang Mountain foothills.⁸ Here the wall is best preserved on north and west, each about 280–285 m long. Surviving segments are 4–8 m wide and stand 2–3 m high. The wall trench, however, is much wider at 15 m, and it appears local peasants shaved down the core of the walls as they leveled fields. Several foundation clusters are reported, the best-investigated so far being a compound in the north with two yards enclosed by front, center, and rear halls. Its overall dimensions would be about 70 m north-south by 55 m east-west. Construction of the Fucheng wall again dates to the Erligang period, but its occupation extends into the following Huan-bei (Middle Shang, or Transitional) period.

The Fucheng site warrants consideration with the evidence from Panlongcheng, Yuanqu, and possibly Dongxiafeng. Each wall is roughly square, and three had a cluster of pounded earth foundations in the center or northeast corner. While these walls are significantly smaller than Zhengzhou or Yanshi, they would nonetheless have been defensible sites. These sites could represent the extension of Shang royal power, attempts at territorial control. It is equally possible that some were occupied by local lords allied to the Shang kings, predecessors to the *fang-guo* “statelets” named in the Late Shang period oracle-bone inscriptions (see Chapter 5).

At still greater distances from the Yanshi-Zhengzhou region are other

walled sites established during the Erligang period: the Wucheng site (Zhangshu, Jiangxi) and the Sanxingdui site (Guanghan, Sichuan). Both are discussed later as regional cultures.

Settlements (*yi*)

A third type of habitation site is documented only in disappointing numbers. Clusters of surface houses made from pounded earth, mud, or sun-dried brick, sometimes with workshops for craft industries and elite burials, were probably common in the Erligang period. Although not walled, they are distinct from prehistoric village sites because of their evidence for social stratification (house types, rich burials). In the Late Shang period, oracle-bone inscriptions often make reference to “establishing a settlement” (*zuo yi*) by royal command. Sites of this type might well correspond to such settlements. Whereas houses and workshops do not survive in great numbers, burials furnished with tokens of elite status such as bronze weapons and ritual vessels appear somewhat more frequently in archaeological reports. In most instances a small cemetery containing such graves points to a one-time settlement nearby. When, in the Late Shang period, we encounter inscribed vessels among such grave goods, we have even stronger evidence for lineage settlements like those recorded in the oracle-bone inscriptions.

The best example of this type is the Taixi site in Gaocheng County, east of Shijiazhuang (Hebei).⁹ Here a mound several meters higher than surrounding terrain contained fourteen linked chambers, most from a single episode of occupation (Figure 2.7). The houses were built using both pounded earth and sun-dried bricks as one- and two-chamber structures. They were aligned parallel or at right angles to each other. Some chambers shared walls, and several houses had open fronts, perhaps to function as a workshop. The type of buildings found at Taixi, which date to the Huan-bei period, were also found at the bronze foundries north and south of the Zhengzhou wall (see below). Two water wells and evidence for several industries—pottery, lacquer, and alcoholic beverages—also characterize this site. The cemetery nearby had over 100 burials, of which some eighteen held bronze furnishings indicative of elite status. Another well-preserved site from eastern Henan, Mengzhuang in Zhecheng County, yielded evidence of a three- or four-chamber house (Figure 2.8), as well as pottery kilns, and nearby pounded earth foundations.¹⁰

Although this discussion was characterized as a “network of sites,” the actual extent of the Erligang Culture is far from clear-cut. Dozens of additional sites are recorded as the result of surveys and limited excavations,

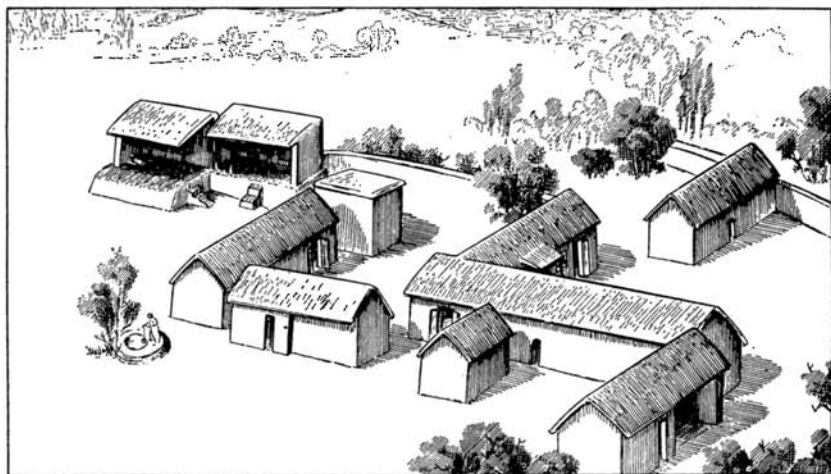


Figure 2.7. Houses at Taixi site, Gaocheng, Hebei, rendering by Zhang Shouzhong and Zhang Wenxin. *Gaocheng Taixi* (1985), p. 32.

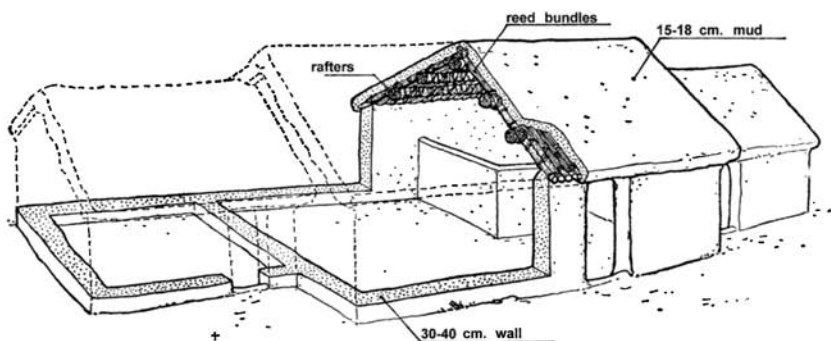


Figure 2.8. House, Mengzhuang, Zhecheng, Henan, rendering by Yang Hongxun. *Kaogu xuebao* 1982.1:53. This three- or four-chamber house (or three or four houses) was built on a pounded-earth base some 14 m long, facing south. The mud walls were 30–40 cm thick. A mud roof supported by reed bundles can be inferred from impressions in clay fragments, and wood (charcoal) rafter fragments some 6–12 cm in diameter may have carried the bundles.

but very few have the depth and range of remains that have been discovered at the few, best-known sites discussed above. In many cases, therefore, pottery alone suggests the presence of the Erligang Culture, an archaeological horizon, without, however, any clear evidence that the locality in question was or was not part of a Shang state. Even in relatively well-preserved and rich sites like Taixi (Gaocheng, Hebei), the actual affiliation of local inhabitants with a Shang state in Henan remains impossible to determine, even if the archaeological identification is certain. The horizon of the Erligang Culture probably extends as far north as central Hebei (with sites like Taixi), as far east as central Shandong (Daxinzhuang, Jinan, Shandong), as far west as the Wei River valley (Laoniupo, east of Xi'an), and possibly even as far south as the north banks of the Yangzi (Panlongcheng, Wuhan, Hubei; see Map 5). An early Shang state might have occupied some of the major walled sites running east-west along the Yellow River into Shanxi (Zhengzhou, Yanshi, Fucheng, Yuanqu, Dongxiafeng). It could have exerted some degree of territorial control or other influence over areas in surrounding north, northwest, and central Henan. But I doubt that an early Shang state was much more than a large part of modern Henan with some neighboring areas.

Still, the concept of a network has corroboration in the archaeological record. In addition to the marker of pottery, the ways that sites were laid out, structures built, crafts made, and burials outfitted suggest that there was interaction between and among sites. For such relative uniformity to exist, I would posit back-and-forth communication between points on the map. In some cases itinerant artisans making lacquer or bronze may have moved from one site to another. Social and religious norms were communicated to create the common burial rites or ritual behavior of people spread out across a large part of North China. Likewise, some migration from centers to outlying areas could be inferred, with the more or less wholesale replanting of material culture and social customs in areas previously unaffected by the Erligang Culture. The people of the Erligang Culture were surrounded in various areas by other groups, considered below ("Erligang and the Regions").

Technologies of Power and Prestige

The elites of the several sites reviewed above held power over others, at least in good part, through technologies they controlled. Authority was asserted and maintained through a network of walled sites and settlements with their pounded earth structures. Force was exercised through men-at-arms and the weapons, including those of bronze, they wielded. Prestige accrued not only from birth status, but also through

the manipulation of symbols such as bronze and jade ritual paraphernalia. The elite relied on techniques of building and labor management, on the crafts of working metal and hardstones, on the procurement of raw materials, and on artisans whose skills actually created objects. Both building and bronze casting have much to tell about the society of which they were a part.

Building

Archaeological sites of the Erligang period are “soft” in the jargon of fieldwork; they do not harbor monumental structures or engineering works constructed from dressed stone or fired brick. Instead, these sites are made with earth that has been dug, pounded hard, sometimes burned. All are processes that leave traces in the ground for the observant eye, but none is as durable as the stone of an Egyptian pyramid or glazed brick on a Mesopotamian gate. The ancient technique of pounding earth (*hangtu*) was rediscovered at Chengziyai and Anyang by the first generation of Chinese archaeologists (see Box 8). In fact, a very similar technique has always been used in the loess lands of North and Northwest China. This technique—literally the core of all foundations, walls, and mounds—is ubiquitous all over the landscape of the Yellow River valley. Surveys conducted by the Cultural Relics Bureau from the 1950s through the 1990s have catalogued hundreds of sites with earthen structures of all periods in each province. But the technology of building in ancient China survived into modern times in yet other ways. Preferences for siting, for composing space and for directing movement within a planned environment, as seen today in the countryside and in urban settings, can also be traced to the early Bronze Age. The technology of building is a long-lasting thread in Chinese cultures.

The area within the Shang wall at Zhengzhou offers the greatest quantity of evidence for building practices in the Erligang period. Unfortunately, finds here are without exception situated some meters below present ground level, and boxed in by recent construction: schools, hospitals, factories, and apartments. Thus each of the dozen-and-a-half foundations reported since the 1970s is partially damaged or overlaid by recent, unmovable structures. Complicating the picture is stratigraphic evidence for several generations of building and rebuilding in these plots. The area was in fact occupied prior to construction of the Shang wall. Moreover, a later Erligang foundation often overlaps an earlier one, destroying portions of the latter or simply hiding them. Features once embedded in foundation blocks like wall trenches and post holes are often missing or damaged as a result of ancient or recent construction. Any attempt to reconstruct an Erligang-period structure at Zhengzhou thus

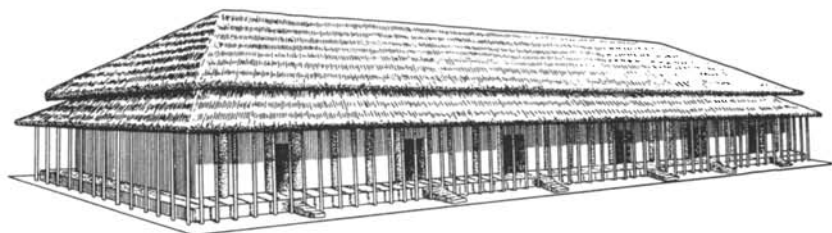


Figure 2.9. Restoration of foundation 15, Zhengzhou, length side to side 65 m. *Zhengzhou Shang cheng* (2001), p. 249.

is extremely difficult. At Yanshi, where the overlay of modern construction is less widespread, the several walled compounds also show evidence of repeated rebuilding.

Work conducted from 1973 to 1983 exposed nine sizeable foundations in the northeastern portion of Zhengzhou, and more recent efforts have revealed an equal number.¹¹ The Henan Institute divides this part of the walled area into ten zones (see Figure 2.1a), with at least twenty-six loci containing foundations. This has led local archaeologists to suggest that as much as one-third of the walled area (100 of 300 hectares) served as a palace precinct. Other opinion holds that much or most of the Inner Wall area was devoted to substantial buildings.¹² Since the southern two-thirds of the walled area is built up much more than the northern areas, it is very difficult to probe and expose undamaged foundations there. Whatever the extent of these so-called palaces, no attempt has yet been made to map the data onto a restored site plan. Only one structure has been given a hypothetical reconstruction (Figure 2.9). The latter is foundation G15 (Zone C8) first reported in 1983, and still the largest structure recorded at Zhengzhou. Its foundation block runs east-west for more than 65 m, and is about 13 m deep (north-south). Rows of postholes along the north and south margins are separated by intervals of 2 m. The circuit of posts created an interior space 9 m deep. The restoration reproduced here takes these basic facts and extrapolates them as a nine-chamber hall with a gallery and overhanging eaves on all four sides. However, most foundations in this palace zone are decidedly smaller, and many patches of pounded earth—in odd shapes and sizes—are reported as well. Some foundations have long dimensions running north-south suggesting east- or west-facing alignment. Some blocks are as much as 3 m thick, but most are about half that. Several deep water wells have been found among these features, and the excavators came upon the stone-lined base and walls of a rectangular water tank, some 100 × 20 m in size.

The evidence from Yanshi is much less, but contributes two features not known elsewhere.¹³ First, most of the substantial foundations at Yanshi were gathered together within small-scale, roughly square, walls. The foundations most likely to be palaces (or palace-temples) were constructed within a compound on the north-south axis in the southern part of the wall (see Figure 2.2). Their axial siting and forward position resonate with much later city planning practices. Secondly, one and possibly two walled compounds contained structures of a distinctly different type, most likely storehouses or granaries. A report from 1995 details three foundations (out of fifteen) from compound J2 in the southwest portion of the city. The platforms were about 25×7 m, their long dimension north-south, and were arrayed in two rows of six and nine, respectively. Each had been rebuilt twice (hence, used in three periods). Traces of walls and of supports within them for an elevated floor (?) would be consistent with storage, and in any event contrast with more common supposed palace buildings. A second compound (J3) may have had similar buildings. Storehouses and granaries could support the idea that the early state collected (and redistributed?) grain or other resources. A walled city was therefore both defensive stronghold and seat of royal authority and a center for storing resources.

Only one excavation from this period allows more detailed assessment of building plans and practices.¹⁴ Two large halls unearthed at Panlongcheng were sufficiently well preserved to expose details of their structures. These halls were located on a platform (about $100 \text{ m} \times 60 \text{ m}$) on high ground in the northeast corner of the walled area. The hall on the south (F2) may have had a large open interior space, while the hall (F1) located behind it seems to have had a four-chamber plan. Two other areas with foundation blocks and post holes are incompletely excavated and described. Yang Hongxun believes the two large halls were surrounded by galleries on all four sides, forming a compact unit. This ensemble would seem to be echoed at the Fucheng site (Jiaozuo, Henan), where three halls enclosing two yards are reported.

The restored hall at Panlongcheng (Figure 2.10) may be representative of the Upper Erligang period. The hall is elevated on a block of pounded earth so that its surface is several steps above the terrace surrounding it on all sides. This foundation was separate from the terrace, and rose from a trench cut into the ground. The foundation block was then cut to create holes for the columns that would support the hall structure. There were actually three circuits of postholes: one running around the outside of the block (for secondary eave posts), another near the margins of the block (main roof eave supports), and those in the footings of the chamber walls. Both the posts that run along the margins and those within the chamber walls were sunk deep into the platform block, resting on cobbles. The small-diameter eave postholes

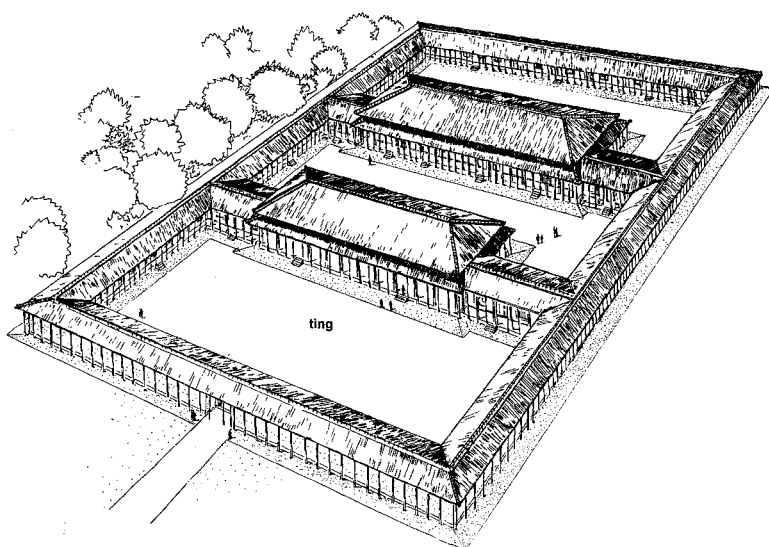
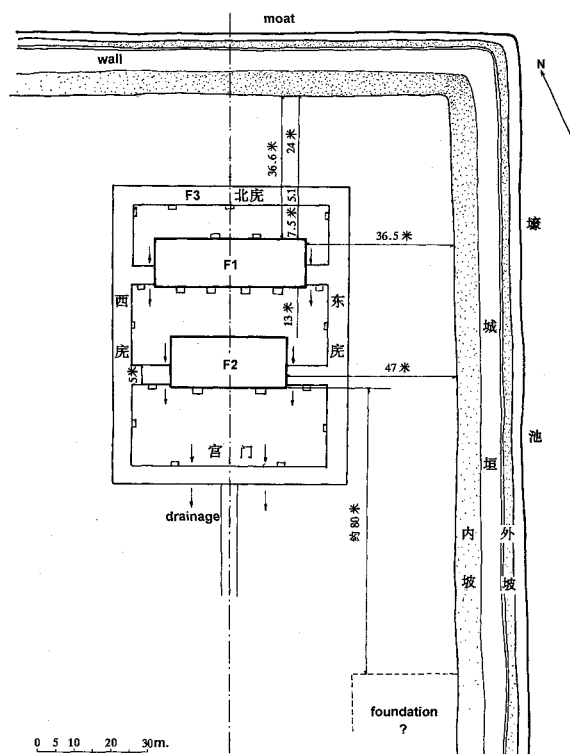


Figure 2.10. Plan and restoration of halls, Panlongcheng, renderings by Yang Hongxun. *Panlongcheng* (2001), pp. 643–44.

are less deep, and generally found as pairs matched to each large post at the edge of the block. Such smaller posts carried the outer eave of a secondary, skirting roof, and possibly also steadied the larger, roof-bearing posts. The chambers had walls of closely set posts covered with mud, while the roofing was probably thatch; few traces of either are reported. It is certain, however, that broken pottery was used around the perimeter of the foundation block to carry runoff away. Details of doors and windows and of the roof frame are unknown. The restoration drawn by Yang Hongxun of the Institute of Archaeology has been extremely influential. The renderings were produced by marrying specific dimensions and features with sensible generalizations, such as general notions of symmetry. Yang's work is a retrospective project. Better-known habits and practices of later times affect his "common sense" assumptions about this period. A measure of continuity is therefore an inevitable by-product of this exercise.

As informative as Yang's renderings are, they necessarily omit much. Two cast bronze fittings recovered (not actually excavated) at the Xiaoshuangqiao site northwest of Zhengzhou are examples of the kinds of details missing from most sites.¹⁵ Each fitting is a box, roughly square in section, with walls on top, bottom, two sides, and front (Figure 2.11). Only the back is missing. The two sides of the box have square openings, while top and bottom have slots running from their center to back edge. These fittings were probably applied over the exposed end of a square wooden beam. The two openings on the sides could have accommodated another piece, wood or metal, inserted through the beam, something like a linchpin. Very little hardware like this has been associated with Shang buildings, although Zhou-period examples are known and the practice continued into later times. (Some bronze plinths were found on one Late Shang foundation at Anyang.) Such fittings were surely among the first things stripped from a site when it was abandoned. The excellent craft and design of these fittings should attune us to other, perishable materials, from textiles to painting, that must have been a normal part of interior and exterior decoration.

The people responsible for a hall like the one pictured at Panlongcheng mastered a variety of specialized tasks. Someone had to locate the building site. Its environment had to be evaluated, including conditions underground. A high water table would make digging any deep trench impossible. Aligning and laying out such a trench required ability to sight on the Pole Star or another natural beacon and drawing straight lines on the ground with right-angle corners. A supply of earth had to be procured from some nearby location. This practice would account for a large walled "borrow ditch" found inside the palace compound at Yanshi. The soil was then refined or cleaned of unwanted

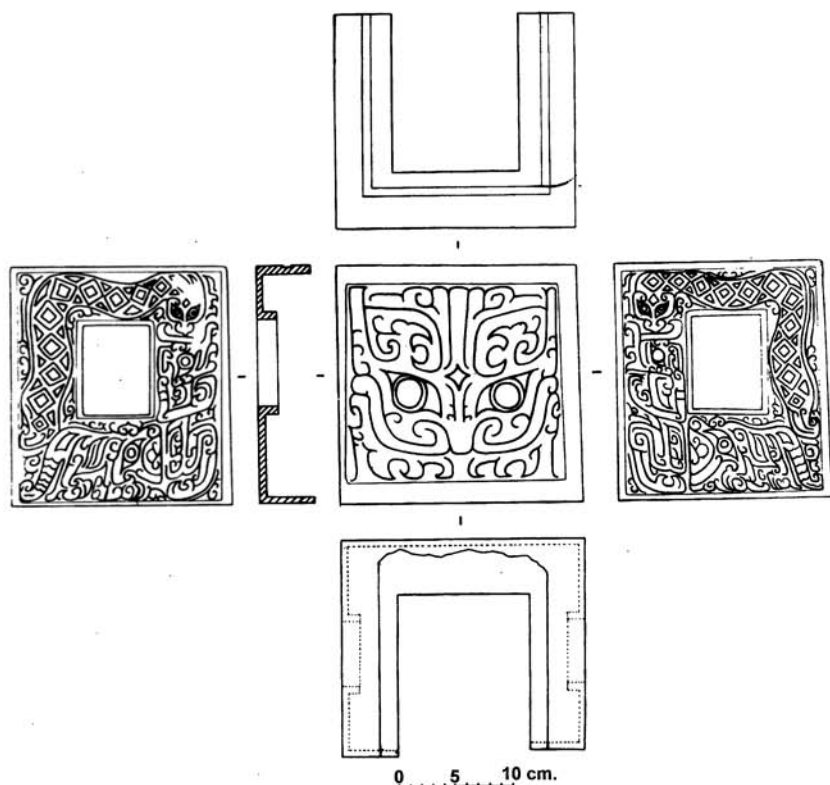


Figure 2.11. Bronze architectural fitting, Xiaoshuangqiao, height 21.5 cm. *Zhengzhou xin faxian* (1993), p. 246.

materials like roots, caliche, and rocks. Tamping the soil required forms and tools to perform the task. Someone obtained tree trunks and cobbles for this purpose. Cutting and trimming more timber was required for the structural frame. Mud plaster and thatch then had to be produced as well. Accepted conventions governed the ratio of width to depth for a foundation, or the size of a chamber or door. Most of this was semiskilled labor, but certain tasks needed experienced, knowledgeable hands.

The largest projects, such as the walls at Yanshi, Zhengzhou, and Huan-bei, also demanded considerable expertise in managing labor. Extrapolating from the volume of earth moved and then pounded hard at any of these sites gives a rough indication of the power of the ruler or elite who occupied the site. In the case of Zhengzhou, a hypothetical force of 10,000 laborers divided among tasks might have needed eight

years to construct the entire wall.¹⁶ This estimate can be manipulated up or down by subtracting or adding labor, and in any case is always affected by assumed numbers of days and length of the work day. To keep a project underway for some years is itself an index of social and economic stability as well as long-term planning. An unfinished wall is not very useful. If exigent circumstances prompted its creation, determination—perhaps coercion—was needed to realize it. Since tradition holds that the Shang kings moved their capitals altogether six times, one must imagine a construction process much like Yanshi or Zhengzhou reenacted on as many different occasions. These must have been momentous events in the lives of the people who took part in or witnessed them.

Bronze Casting

Although Chinese scholars continue to monitor finds at Erlitou closely, most archaeologists would acknowledge that the Erligang Culture created the first large-scale, widespread bronze casting industry. Discovery of evidence for this technology during the Zhengzhou excavations of the 1950s gave an initial solution to one of the great puzzles of the day: what had preceded the sophisticated metallurgy from Anyang? Finds at Zhengzhou included both a pair of foundry sites with debris as well as a modest number of graves furnished with bronze vessels, weapons, and tools. This stream of material has flowed continuously ever since, most notably with three ritual deposits found outside the walls, each containing *fangding* vessels, the largest bronze objects of the period (Box 9). The earliest levels at Zhengzhou are still bereft of any metal, but the Lower Erligang phase has yielded bronze grave goods and evidence for activity at the Nanguanwai casting site. The industry flourished during the Upper Erligang phase, as did both foundries, and persisted into the late Baijiazhuang phase when, some scholars believe, the walled site was abandoned. At least 129 ritual vessels are reported from Zhengzhou, including cooking types (*ding*, *fangding*, *li*), wine preparation and serving types (*jue*, *jia*, *he*, *gu*), food and water bowls or basins (*yu*, *gui*, *pan*), and wine storage types (*lei*, *zun*, *you*).

Major excavations were carried out at Panlongcheng, Hubei, in the 1960s and 1970s. This small walled site (a citadel?) was flanked by graves furnished with bronze tools, weapons, and vessels, so numerous that at the time they eclipsed the number then known from Zhengzhou. About 158 tools and weapons and 186 vessels are reported from twenty-seven excavated graves (or were collected on site). Although some traces of local casting were found, the most remarkable feature of these discoveries was their near identity with their Zhengzhou cousins about 500 km to the north. Types, varieties, and decoration all seemed to come “from the same mold” as objects in Henan. For our purposes, the material from

Box 9 Royal Rites at Zhengzhou?

After fifty years of work at Zhengzhou, traces of the Shang kings most Chinese scholars believe inhabited the city remain elusive. There are no richly furnished graves and ritual vessels of a size or quality that suggest royal patronage. (A similar gap was noted at the Erlitou site.) Exceptions to these remarks are three accidental finds that share a number of traits.

All three discoveries were made during construction at locations outside the Erligang-period wall. Two finds near its southeast and southwest corners were fairly close to the wall (50 m) but outside the moat, while a third was located on a ridge about 300 m west of the wall. The initial discovery in 1974 was an unintended by-product of digging an air raid shelter (one of Chairman Mao's maxims was to "dig deep" for this purpose). At the time, context could not be established, and the excavators left open the possibility of either a grave or a sacrificial deposit. Reexcavation in the 1990s confirmed this Duling find was not a grave, but shed little additional light. Two *fangding* placed side by side, with a *li* vessel inside one of them, were the first large-scale Erligang period vessels found. One was no less than a meter in height, weighing 86 kg (Figure 2.12). It was duly noted at the time that such large castings must be royal possessions, and that *fangding* in pairs were associated with royal burials at Anyang.

The second find in 1982, at the Xiangyang Muslim Food Products Factory, was more informative and certainly richer (Figure 2.13). This again was a construction site, with Erligang pits some 4.6 m below ground level. Three pits with pottery and animal bones flanked another containing thirteen bronze vessels. Again two large *fangding* were found, as well as a large round *ding*, two small *ding* with flat legs, two *zun*, *lei*, *you*, two *gu*, and two bowls (*yu* and *pan*). The *fangding* were nearly as large as the Duling pair (both 81 cm in height, weighing 75 kg and 52 kg), and the round *ding* and *pan* were also very large. The *lei* and *you* are among the finest vessels of the period in the quality of their surface decoration (Figure 2.14). A sacrificial context seemed plausible.

The third find, in 1996 at a construction site near the southwest corner of the Shang wall (Nanshuncheng Road), has many features in common with the first two. Here again a pit with vessels was discovered about 5 m below ground level. In this case, however, an abandoned water well had been used, extending another

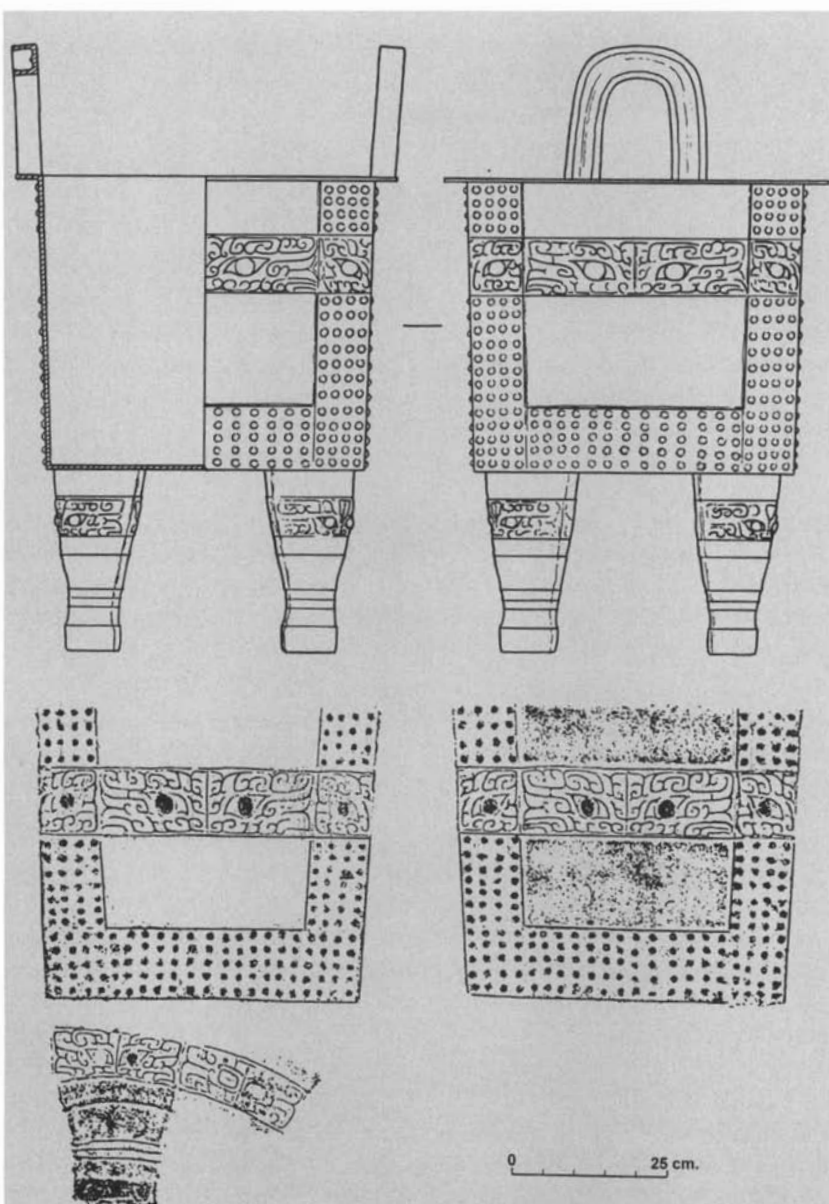


Figure 2.12. *Fangding* from Duling, Zhengzhou, height 100 cm.
Zhengzhou Shang cheng (2001), p. 795.

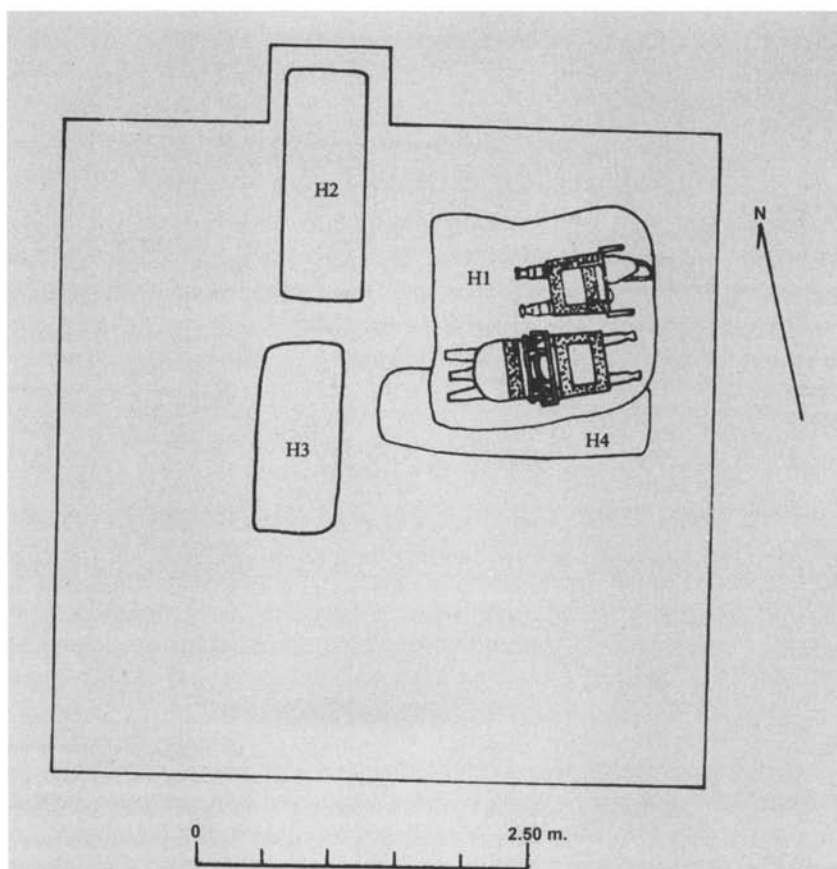


Figure 2.13. Diagram of Muslim food products factory pit, Zhengzhou. Zhengzhou tongqi (1999), p. 83.

4 m deeper (Figure 2.15). The vessels were installed in the wall of the well, which had been scooped out to accommodate them. The twelve vessels included four *fangding*, *gui*, two *jia*, two *jue*, as well as two *ge* dagger-axes and a *yue* axe (Figure 2.16). Abundant pottery indicates a dating of the Baijiazhuang period (hence “Middle Shang”), making it the latest find, perhaps when the walled site was no longer a major center. The four *fangding* were also distinctive: one was a good quality casting (height 83 cm, weight 52.9 kg), but the other three were crudely cast, smaller in size (heights 72.5, 64, and 59 cm), and lighter in weight (26.7–20.3 kg).

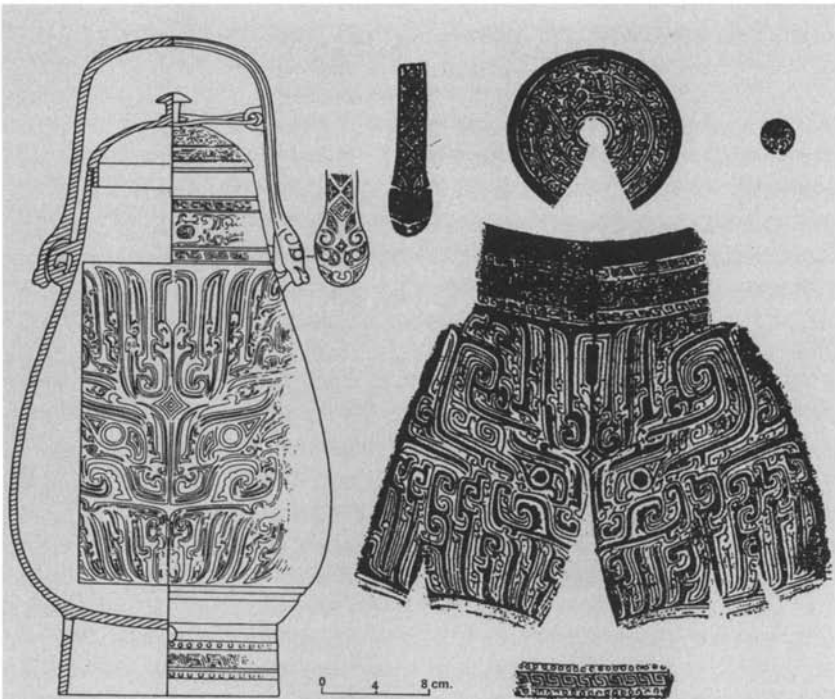


Figure 2.14. *You* from factory pit, height 50 cm. Zhengzhou Shang cheng (2001), p. 822.

Two interpretations of these pits and their contents are currently debated. The possibility each was a sacrificial offering deserves consideration. Working against this view are the variety of vessels in each assemblage, the lack of other sacrificial contents (except animal bones at the factory site), and use of an existing well for the final pit. The view that these were caches, hasty burials of valuables in a time of instability, is at least as plausible, and would account for the traits noted above, and for the care taken placing smaller vessels inside larger ones. Whichever interpretation we favor, the pits do offer us a glimpse into casting for royal (or at least high status) patrons, including pairs of *fangding*, a habit perpetuated into later periods. The four vessels of the last pit suggest a set of graduated *ding* to some writers, but the poor quality of three of four may instead be evidence for the early appearance of surrogate vessels (*mingqi*).

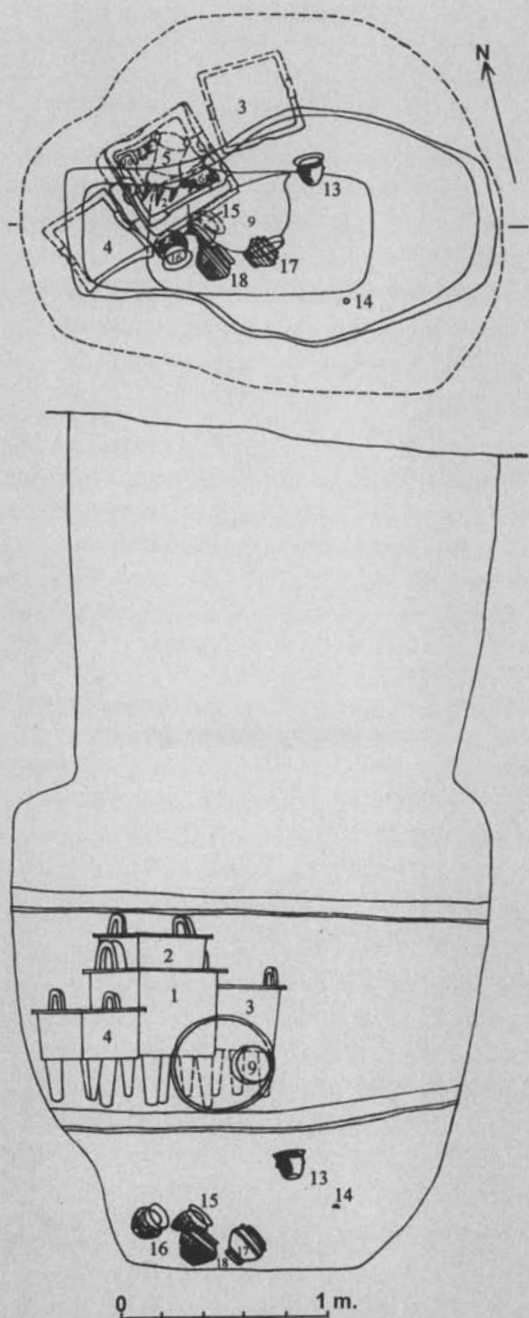


Figure 2.15. Diagram of Nanshuncheng road site, Zhengzhou. *Zhengzhou tongqi* (1999), p. 8.

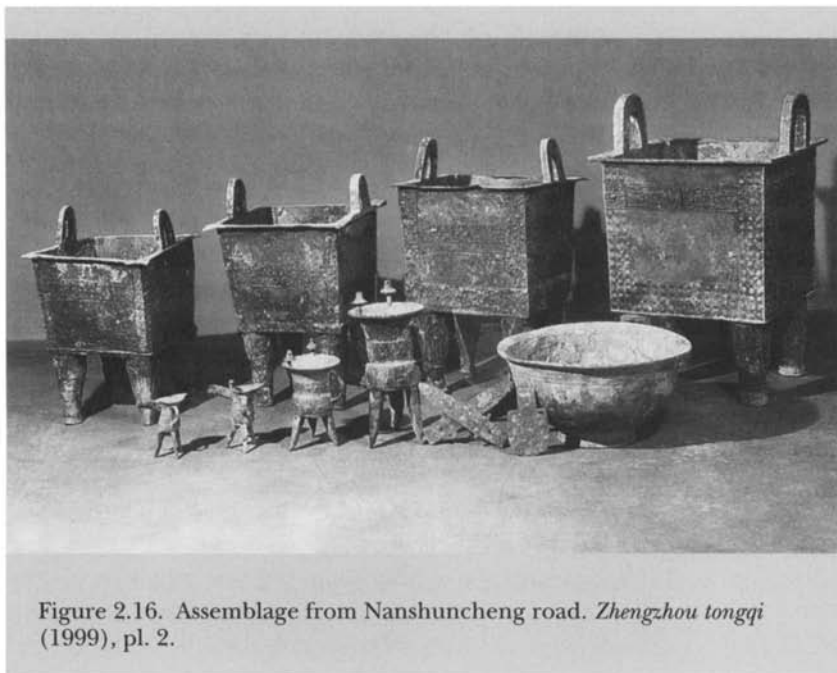


Figure 2.16. Assemblage from Nanshuncheng road. *Zhengzhou tongqi* (1999), pl. 2.

Panlongcheng, in spite of its distant location on the north bank of the Yangzi, will be considered an integral part of the Erligang Culture.

These two centers account for more than half the total number of bronze vessels predating Late Shang now documented in the literature. Other vessels emanate from numerous small finds, usually graves with assemblages of the most common ritual types (*jue*, *jia*, *ding*, and *gu*). Finds are distributed across the North (Henan, Shandong, Hebei), Northwest (Shanxi, Shaanxi), Middle Yangzi (Hubei), Gan Yangzi (Jiangxi), and even Lower Yangzi (Anhui) macroregions. However, wide distribution is a phenomenon of the Huan-bei (Middle Shang or Transitional) period. Very few Erligang period vessels are in fact known outside Henan, Shaanxi, and Hubei. This evidence from ritual vessels suggests a core region with its own tradition of bronze casting in the Erligang period, followed by a Huan-bei phase during which local industries began to flourish over a broader area. I assume that a technology created in the north (at Erlitou and Erligang) was carried far afield, where it was adopted and then further developed by other peoples. These groups need not have owed allegiance to a state in Henan.

Copper ores necessary to sustain a bronze industry are most abundant today along the middle and lower reaches of the Yangzi. The low

mountains of northern Jiangxi, including the margins of Lake Boyang, today hold perhaps one-third of China's copper deposits, the richest in all East Asia. While we cannot rule out the possibility that mining took place in the north, perhaps at sites now depleted, there is positive evidence that copper ore in Hubei and Jiangxi was worked as early as the Shang and Western Zhou periods. A survey of the region around Ruichang, Jiangxi, located twenty-nine sites of mining and smelting dating from Shang through Tang.¹⁷ Here, at a site called Tongling ("copper ridge"), the best evidence for Shang-period workings has been found. The site covers at least 70,000 sq m with adjacent slag deposits over perhaps 200,000 sq m. In excavating a small portion of those areas, over 100 vertical shafts were revealed, as well as underground galleries, open pits, and even traces of work sheds. Stratigraphy and artifacts date the earliest of these features to the Erligang period as known at Zhengzhou, Panlongcheng, and the settlement at Wucheng, Jiangxi. The excavators believe that ore extraction began with open diggings where ore beds were exposed. Pits were dug into the slope of the hill following the ore body, their sides sometimes reinforced with wooden retaining walls. Vertical shafts strengthened with square frames and planks descended to reach deeper beds, which were followed underground with galleries reinforced with post and lintel framing (Figure 2.17). Remnants of these shafts and galleries survive today, as does the equipment used by miners. Wood, stone, and bronze tools were employed to dig ore, and buckets and baskets carried loads to the surface. Ropes and winches aided in this back-breaking labor. The excavations also uncovered evidence that ore was dressed using wooden water channels. Much the same range of evidence, although not yet dated into the Shang period, has been documented at the better-known Tonglushan mine in Daye, Hubei, not far west from Tongling. At each site, large quantities of slag with modest copper content testify to on-site smelting. (Indeed furnaces for this work have been located at Tonglushan.) Once smelted to remove impurities, generally iron, copper ingots could be transported to other locations for casting. There is no evidence to suggest casting at either mining site.

Casting appears likely at a number of major settlements in the Erligang period, but, except for Zhengzhou, evidence remains sketchy. Some traces of casting—slag, crucibles, mold fragments—are reported from Yanshi, Dongxiafeng, and Panlongcheng. But two localities at Zhengzhou overshadow these finds.¹⁸ One foundry at Nanguanwai operated from the Lower Erligang phase through Upper Erligang, while the other site, near Zijingshan, is dated only to the latter phase. Both are situated short distances outside the south and north city walls, respectively. Each was investigated in the mid-1950s, but apparently these sites have not survived the rapid modernization of the city. At Nanguanwai, in

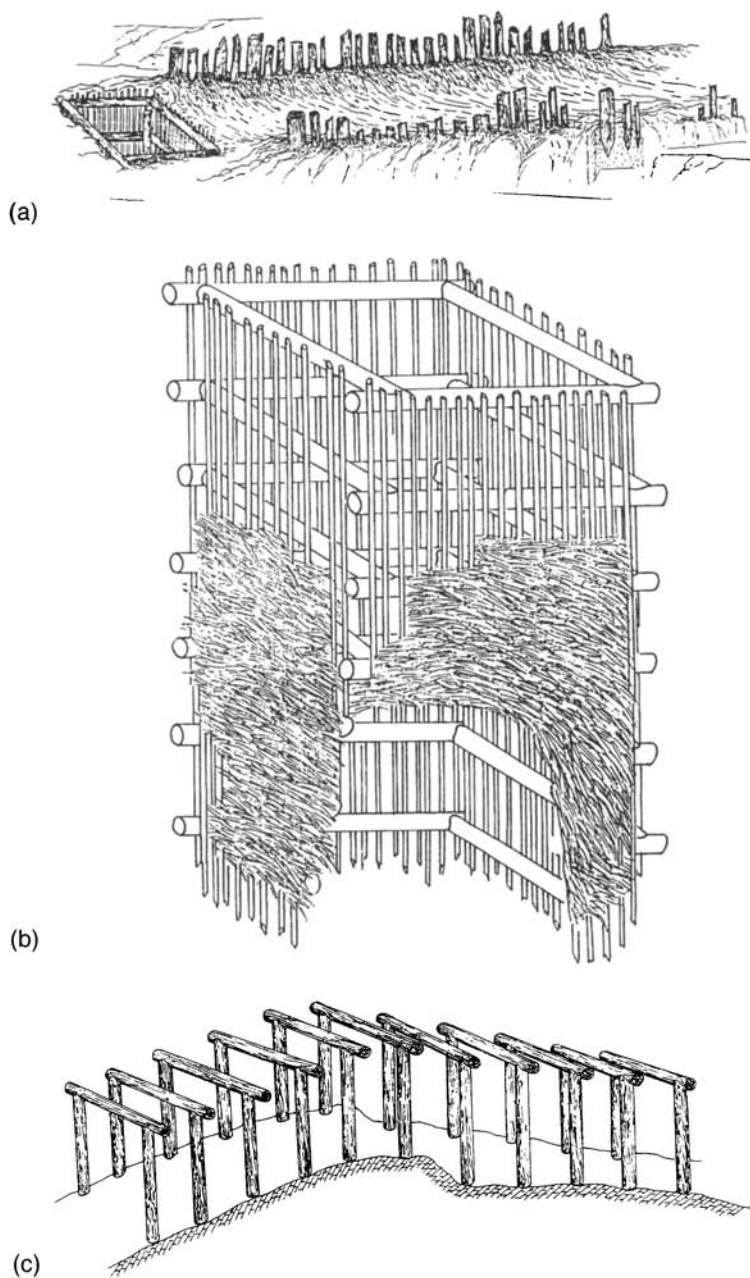


Figure 2.17. Erligang period mining at Tongling, Jiangxi: (a) open pit and shaft; (b) shaft framing; (c) gallery. *Kaogu xuebao* 1998.4:475, 477, 481.

a core area about 130×90 m, the excavations uncovered an extensive working surface with spills of bronze, furnaces located in one corner, and casting pits in the opposite corner. Three different kinds of ceramic crucibles were found, their inner surfaces encrusted with alloy. At the Zijingshan site, near the present Henan Hotel, six earthen wall houses with two chambers each were excavated in an area about 40 m or 50 m square. The house floors were covered with alloy and slag. Several houses had open sides that suggest their use as workshops.

Ore, slag, burning and spills, crucibles, and especially ceramic molds were found at both sites. Tool molds were abundant (Figure 2.18). Along with molds for weapons, at Nanguanwai they accounted for about 46 percent of the fragments in Lower Erligang and Upper Erligang. Vessel molds were only 6 percent and 22 percent, respectively. For both sites, the ratio of tool and weapon mold fragments to vessel fragments was 3:1 (from 27 percent to 48 percent of fragments remain unidentified). Some scholars claim this demonstrates the key role of bronze in various forms of agricultural and industrial production. The number of ritual vessel types represented among mold fragments comprises *ding*, *li*, *jue*, *jia*, *gu*, *lei*, and *pen*, many but not all of the vessel types (seven of thirteen) attested through excavations.

The debris described above supplies most of the direct evidence for how bronze casting took place. Our present understanding of this process, however, relies heavily on physical examination of the objects themselves.¹⁹ This account emphasizes major conclusions but glides over technical details that elude us or remain controversial. The technology was specific to China, with proximate local roots for all its major features. It is a process grounded in the earlier pyrotechnology of working clay, although admittedly it differs in key respects. While some circumstantial evidence for other techniques like smithy work can be adduced, these alternative methods were never used to create either the tools and weapons or the ritual vessels known from the Erlitou and Erligang Cultures.²⁰

The segregation of mining and smelting operations from foundry sites at major settlements was noted above. It is assumed but not proven that these operations were controlled by the Shang state or subordinate local rulers. The labor force employed at the Yangzi mines and smelting sites could be local or a cohort from the north. In some ancient societies slaves or forced labor worked mines, but nothing in the material record suggests as yet who descended the shafts or fed the furnaces at a Tongling mine. At Zhengzhou we can imagine both skilled and unskilled hands at work in the foundries, which again are assumed to be royal. Because the Zijingshan site in particular had large, snug ground houses, some scholars think foundry workers enjoyed preferential status

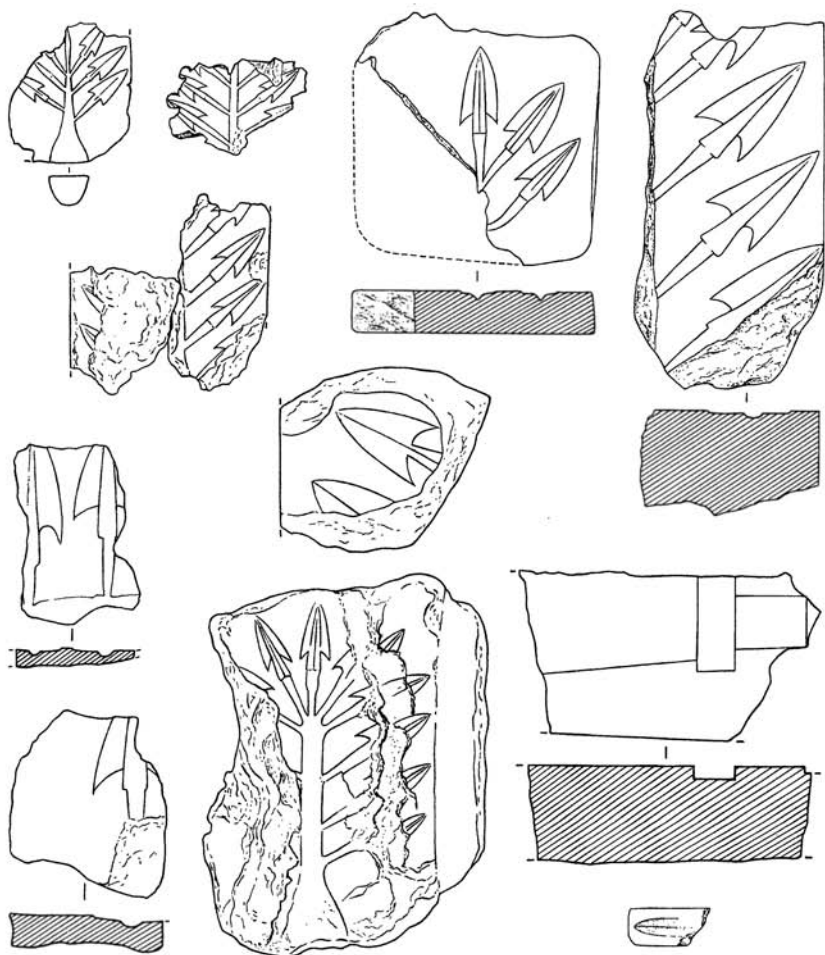


Figure 2.18. Ceramic molds from Nanguanwai, Zhengzhou. *Zhengzhou Shang cheng* (2001), p. 356. These broken slabs of bivalve assemblies for arrow points show that seven to eleven points were cast in a single pour.

compared to other common folk. But since the floors of these houses were covered with spills and slag, I would prefer to call them workshops and leave open the question of housing and, by extension, status. Many people must have been employed to transport copper ingots from Tongling to Zhengzhou or elsewhere, as well as in gathering raw materials such as the firewood or charcoal and the clays needed at casting sites. All parts of the production process—mining and winning the ore,

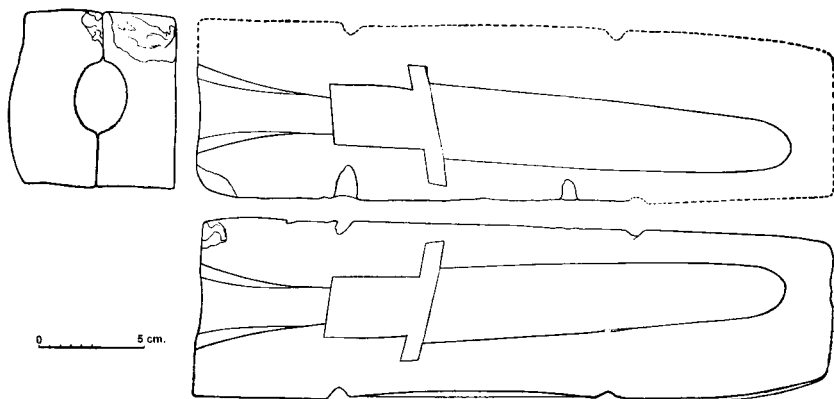


Figure 2.19. Bivalve mold for *ge* dagger-axe. *Yinxu de faxian yu yanjiu* (1994), p. 265.

transportation, supporting a foundry, and casting itself—demanded supervision and coordination. Without this management, the process could not go forward. Bronze casting in this period was incipient industrial production.

The first steps at the foundry took place in a shop devoted to making ceramic models and molds. Thus potters were essential, as were all the skills and equipment they manipulated. A model of the object to be cast could be formed by sculpting clay, or by carving wood or another material, or even bypassed by using an existing object. Thus a single bronze *ge* dagger-axe (or a model of same) could be used to create multiple sets of ceramic molds (Figure 2.19). If the model was clay, it would be dried, fired, and perhaps given additional fine detail by carving. The all-important next step was to form outer molds in sections by pressing clay slabs against the model. In the case of a flat blade, two slabs of clay would make a bivalve mold set. After the top and bottom slabs were impressed against the model, they were removed and given a backing of coarse clay. Molds too were dried and fired. In this simplest case, little else is required as preparation. The bivalve mold set would, however, require openings for pouring in molten alloy and allowing hot gases to escape. To ensure mold pieces stayed together in proper registration, they were probably invested with more clay to form a brick. Once the pour of alloy had taken place, the custom was to break off outer molds, exposing a freshly cast dagger-axe, while also destroying the molds. Some labor-saving steps were already known. Arrowheads, for example, were cast as sets, using bivalve slabs that carried multiple impressions (see Figure 2.18).

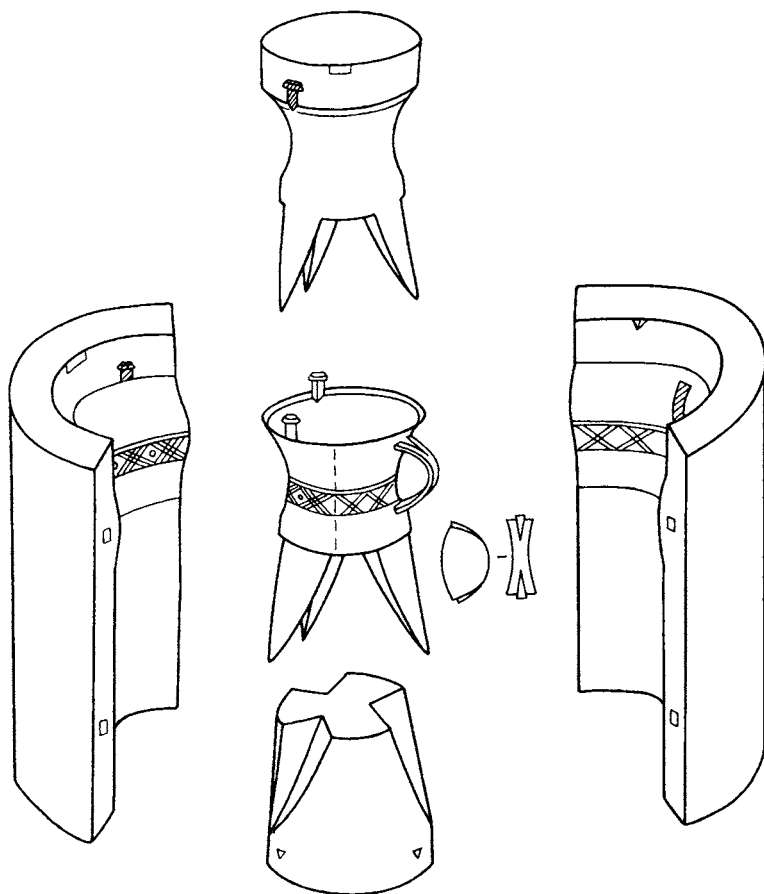


Figure 2.20. Mold set for *jia*. Panlongcheng (2001), p. 581.

Producing a set of molds for a dimensional object like a *jia* tripod requires a few more preparatory steps. Assuming a clay replica of the tripod was made first, it would then be possible to apply soft slabs of clay against the model as in the bivalve dagger-axe example. Since *jia* and other vessel types are round in cross-section, two, three, or four mold sections would be made (Figure 2.20). For most tripods, the division clearly was the midline of each leg; such lines are often visible. The mold sections for a round *jia* must, of course, be prepared so that they lock together at their edges. Tenons and mortises seem to have done the trick. Two other major steps in mold preparation still remained. The space between the three legs must be occupied by a core, and similarly

the interior of the *jia* bowl also required a core. If the legs were to be hollow, the core inside the bowl must carry cores for them as well. Many studies assume that a hypothetical clay positive model was in fact cut down to create the inner core. The amount of clay shaved from the surface of the model then became the thickness of the cast bronze vessel wall. Such shaving would, of course, also destroy any relief or fine detail on the model. The interleg core, on the other hand, would have to be made separately. Any dimensional vessel required these several parts: two or more outer-piece molds, an inner core, and a core for the legs or ring base.

The last stage in mold preparation is decoration. Although little decoration appears on Erlitou objects, almost all Erligang vessels have surface decoration, either in relief or “*intaglio*.” Relief on the final cast vessel surface is readily achieved by incising the inner surface of an outer mold section. Carefully examining the raised thread relief of early vessels will often suggest whether the line was cut into a dry surface or rather impressed in soft clay. The quality of line reflects the condition of the clay. Of course the same effect could be achieved in other ways. If the model had thread relief on its surface, soft clay impressed against it would pick up those lines as depressions. Sometimes this process is visible as well. In producing relief with different degrees of fine detail, these methods might be combined. Thus a raised band could be impressed onto the mold from the surface of the model, and finer lines could then be added by carving the outer mold. The opposite effect of a pattern sunk into the surface of the cast vessel (“*intaglio*”) requires the opposite steps. The inner mold surface must then carry relief, and that also could be created either by carving or by impressing. While true stamped decoration seems to have been fairly common on pottery, it is unlikely it was used for molds. Up to this point, the production process has relied on potters and on hands skilled at carving.

Working bronze in the Erligang period usually means a ternary alloy of copper, tin, and lead.²¹ (The objects from Erlitou are tin-bronze, with inconsistent percentages of lead.) To cast is to manipulate a fluid created by following a recipe using several metals. The proportion of each metal affects the color of the alloy, its hardness or strength, its viscosity, and its ability to pick up fine details in molds. While the logic of these alloys is clear from modern science, the reality of the ancient foundry remains shrouded in mystery. How was a batch created for melting in a crucible with its charge of fuel? Did the master founder take a handful or scoop of copper, a dollop of tin, and then add a pinch of lead? How was the melt judged to be ready for pouring if it was inside a crucible placed within the furnace? We have crucibles. They generally have a plug base so they could be inserted into a collar for secure seating, as

well as thick walls with air pockets for better insulation. We do not, however, have the tools for manipulating red-hot crucibles, for example for tapping and pouring. It is generally assumed a sand pit or similar placement was used when the mold assembly received the pour. Perhaps the mold assembly was itself heated so that hot metal did not fracture cold clay, but how could that be achieved? Once the pour took place, we know that only a little time was needed for the metal to set up. The molds were then broken off, making more debris for a future archaeological site.

Several other key details have escaped notice so far. Maintaining the desired thickness between inner core and outer molds usually required a spacer or chaplet. Often scraps of metal were placed between the two, but care in joining cores with outer molds also helped achieve this aim. After casting, core material had to be scraped out of the vessel interior, but it might be hard to reach (as with a *he* pouring vessel), or even sealed inside, in the case of a closed leg. Flashing is inevitable after such casting, so cold working with tools like chisels or abrasive stones was needed to remove fins where seams met. Even so, the lines of mold sections can often be detected. Most archaeological objects have experienced some degree of corrosion in their long slumber underground. This green patina appeals to some sensibilities, but was not the intended appearance. Depending on tin and lead percentages, a bronze might be more or less red-yellow.

There are many specific technical challenges overlooked in this rather schematic account. The main features of the technology seem reasonably well understood, however. They present a striking contrast to methods employed in other cultures. They also contrast with evidence for metallurgy in late Neolithic and Aeneolithic cultures northwest and north of the central plains (see Chapter 1). The fact that those regions are now a part of the PRC does not by itself make them ancestral to metallurgy as practiced in the Erlitou and Erligang Cultures.

Erligang Society: Material Evidence

The Erligang Culture of Henan has as yet yielded almost no written sources.²² This leaves us without direct knowledge of what these people called themselves, how they conceived their society and its neighbors, and the ideology that integrated what they thought and how they acted. Yet material evidence can inform us indirectly about these topics. Although Chinese archaeology places great emphasis on pottery and its detailed analysis as a tool for identifying culture groups and establishing chronology, one cannot assume simple correlations between pottery and people. When we identify sites in Henan, southern Hebei, the Wei

River valley of Shaanxi, and the Jiang-Han region of Hubei as comprising the Erligang Culture, we do so because of abundant evidence that these communities shared many things that left physical traces. Although in Henan it is likely these were the ancestors of the Shang (Box 10), we will continue to use the name Erligang Culture for societies of this period because the identity of peoples who shared this culture in greater or lesser degree remains unknown. Using the name Erligang Culture reminds us that our conclusions depend on archaeological evidence, rather than epigraphic sources or historiographic tradition.²³

Box 10 Myths of the Shang

Like the founder of the Xia, the patriarch of the Shang had a miraculous conception:

*Yin Xie's mother was called Jiandi. She was the daughter of the Yu Song clan and the second concubine of Di Ku. Three of them went to bathe. They saw a black bird drop its egg. Jiandi picked it up and swallowed it. Then she became pregnant and gave birth to Qi. Qi grew up and gave meritorious service in helping Yu control the floodwater. Emperor Shun therefore gave this command to Qi: "The people do not have close family relationships and the five social relationships are in disorder. You will serve as my director of retinue." He gave him the Shang fiefdom and conferred on him the name Zi-shi. Xie flourished in the reigns of Yao Tang, Yu Shun, and Yu the Great. His accomplishments were well known among the people, and so the people became peaceable. (Anne Birrell, *Chinese Mythology: An Introduction* [Baltimore: Johns Hopkins University Press, 1993], p. 256)*

Note that Xie's mother, Jiandi, was a concubine of Di Ku, who was also married to the mother of Hou Ji, although he did not father the Zhou founder. The motif of the blackbird also has a parallel in the founding legend of the Zhou (see Box 20). Like Great Yu, Xie is placed in the eras of Yao and Shun, and is a contemporary of the Zhou founder. The several threads woven together in this extract from *Shi ji* annals are also found in earlier texts like *Shi jing* and *Lü shi chunqiu*.

Whereas Xie was the mythic lineage founder, the first ruler of dynastic Shang was "Tang the Successful" (Cheng Tang). His accomplishment was heroic action in deposing the evil last ruler of Xia, named Jie (see Box 7). Tang's efforts were paradigmatic: Tang's army willingly followed him into battle; his exemplary character attracted a wise minister (Yi Yin); and he personally wielded a great battle ax in the climactic conflict.

Tang is also the leading actor in a drought myth. As a virtuous ruler, he offers himself on behalf of his people:

Long ago, when Tang had conquered the Xia and ruled the world, there was a severe drought and the harvests failed for five years. So Tang went in person to pray at Mulberry Forest, saying, "If I, the One Man, have sinned, do not visit your punishment upon the myriad people. If the myriad people have sinned, let me alone take the blame. Do not let the demons and spirits of Almighty God harm the lives of my people simply because of my own stupid mistakes." Then he cut off his hair, rubbed his hands smooth, and offered himself as a sacrificial beast to enable him to seek the blessing of Almighty God. And then the people rejoiced, for then there was a heavy fall of rain. (Birrell, p. 86)

Tang is credited by *Shi ji* with several of the texts collected in the *Book of Documents*, but only the "Vow of Tang" (Tang shi) survives. This text supplies a rationale for the Shang overthrow of the Xia, no doubt useful propaganda in the hands of its Zhou compilers. It ends, however, with a threat to the listeners: "If you do not obey the words of this proclamation, I will kill you with your wives and children; there will be nobody who will be pardoned" (Bernhard Karlgren, *The Book of Documents* [Stockholm: Museum of Far Eastern Antiquities, 1950], p. 20).

Much has been made of the supposed correspondence between the Shang royal genealogy as reported in Sima Qian's "Annals of Yin," and ancestors named in the oracle-bone inscriptions. The correspondence is by no means complete or unproblematic. In a detailed table summarizing the Shang royal genealogy as known from the inscriptions, David N. Keightley notes numerous conflicts between the two sequences of succession (David N. Keightley, *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* [Berkeley: University of California Press, 1978], pp. 185–87).

Some knowledge about social structure can be read from the evidence of large sites. The walled settlements that flourished in Henan (at Yanshi, Zhengzhou, and Huan-bei, Anyang, successively) could not have been built without a social order in which a small number of people controlled a much larger number. Forced labor of "commoners" and "elite" domination are plausible inferences derived from the physical facts of these walls. Huge walled areas were not created simply as demonstrations of power over people. They must have been desirable in order to control, house, and protect a population so sizeable that large-scale construction was required. By contrast, a smaller walled site (like Fucheng, Yuanqu,

Dongxiafeng, or Panlongcheng), suggests a satellite or citadel with a small population, perhaps an armed force tasked to project authority for a large center. An elite also lived in these communities, based on the impressive halls and compounds at Panlongcheng, Fucheng, and Yuanqu. Both sizes of walled sites, in turn, testify to an exigent need for security. They indicate hostile forces in the area or on the horizon and the need for protection from them. Unwalled settlements, like a Mengzhuang or Taixi, gave up such security while they accommodated smaller populations. Apparently such settlements supported a mixed community of petty elite, warriors, and common folk, both farmers and artisans.

Cemeteries at both larger and smaller settlements provide additional material evidence for society. Although it seems unlikely that any royal tombs from the Erligang Culture have yet been found, I assume the existence of kings and a royal elite from the evidence of extensive palace-temple compounds at both Yanshi and Zhengzhou. Only burials of medium and small scale, however, are documented so far at Zhengzhou, while similar burials are known in some quantity from Panlongcheng (Upper Erligang phase), Laoniupo near Xi'an (Shaanxi; Huan-bei period), and southern Hebei (Zhaoyao, Wu'an and Taixi, Gaocheng; both Huan-bei period).²⁴ These burials are consistent in many physical features, animal and human sacrifice, and grave goods. Differences between grave size and equipment, assemblages of bronze vessels and weapons, and various prestige items including jade, ivory, and lacquer, suggest social stratification. Burials are the prime context preserving the material legacy of Erligang Culture. With the notable exception of several ritual deposits at Zhengzhou (see Box 9), most bronze vessels have emanated from burials, whether properly excavated or disturbed. Burials also account for the more modest evidence for jade working, glazed stonewares, and lacquer ware in this period.

A grave was a conscious effort by the living to inter the dead with care. When we observe stereotyped burial practices, we assume common motivations and belief systems were in play. In fact, the burials of the Erligang period are so predictable that they would seem to be the result of applying an established ritual with its features graded from simple to complex. All Erligang burials are interments of the whole corpse in the ground. The body was generally laid supine and extended in a posture like sleep. Mourners who assembled around the grave thus might look directly at the deceased. Digging a grave trench and creating the space needed for the extended posture required more energy than other customs such as urn burials or flexed posture. When two other common features are present, the expenditure of energy was greater still. Many graves have a ledge around the sides of the shaft (Figure 2.21). Furnishings might be arrayed here, but this ledge also facilitates access to the

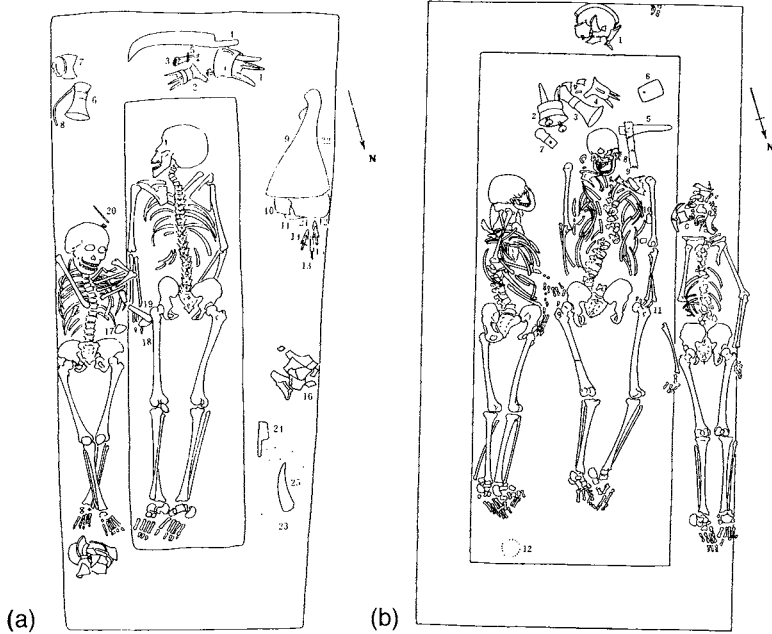


Figure 2.21. Burials at Taixi: (a) Grave 14, period I; (b) Grave 85, Period II. *Gaocheng Taixi* (1985), pp. 148, 155. The skeleton of a forty-five-year-old male occupied Grave 14, probably wrapped in a mat and interred in a lacquered wooden coffin. A twenty-year-old female placed on the ledge nearby may have been buried alive. Although there was no waist pit, two dogs were interred at the ends of the trench. Other grave goods led the excavators to suggest this was the burial of a shaman-medicine man. In Grave 85, a twenty-five-year-old male is flanked by two male victims, one twenty and the other thirty-five. Six dogs were interred as well. In both graves, bronze ritual vessels are clustered near the head of the deceased.

coffin and corpse below. Wooden coffins usually do not survive, but impressions are often evident, as well as lacquer traces. Like the ledge, the coffin required additional expenditure and labor. When the shaft above the coffin and ledge was refilled with hard pounded earth, the grave was then well sealed, a final expression of care. Rectangular shaft, ledge, and coffin were the basic elements of an Erligang period burial for a small but notable percentage of the population.

Other stereotyped features of Erligang burials hint at rituals performed during the funeral. Many graves have a square or rectangular pit in the base of the shaft known as a "waist pit" because it lies under the midsection of the corpse. The normal content of a waist pit is a dog;

some burials have more than one pit or more than one dog. Human victims sacrificed at the funeral rites are also fairly widespread, although neither Zhengzhou nor Panlongcheng have many reported examples. At Taixi, nine of ten burials with bronze furnishings had victims. At Laoniupo near Xi'an, about half (21 of 38) of the graves had victims. Establishing the age and sex of skeletal remains is only sometimes possible. Victims were usually younger than the deceased and might be either male or female.

Grave furnishings consisted of pottery and bronze vessels, tools, or weapons, plus stone (but more rarely jade) objects. Some of these items may register gender roles or social identity. At Taixi, for example, the excavators identified various "warrior graves" as well as the grave of a supposed medicine man. Weapons, in fact, are found with both male and female skeletons. Does this mean that all graves with *ge* dagger-axes are warriors? Or was that weapon a marker of status, individual or family-based? Many graves with bronze furnishings at such outposts as Panlongcheng, Taixi, Zhaoyao, and Laoniupo had *ge* or other bronze weapons. This evidence reinforces the key military role of the lineages at these locations.

For the community as a whole, however, bronze furnishings were not to be taken for granted. At Taixi, probably the most thoroughly investigated site, only 10 of 112 graves contained any bronze vessels.²⁵ When present, they are generally limited to the pair of a *jue* pouring vessel and *gu* goblet. The assemblage might be enlarged by adding a *ding* tripod cooking vessel and a *jia* wine warmer. These four types account for the majority of Erligang period bronze vessels. A typical bronze assemblage facilitated a wine offering (*jue* and *jia* for warming and *gu* for drinking), with a meat course added in some cases. A small number of more richly furnished graves (only seven altogether from Zhengzhou and Panlongcheng) account for additional vessel types. One vessel, a trumpet-mouth container (*zun*), is among new types soon added to the bronze repertoire; it flourishes from the Huan-bei period onward. Pottery no doubt also played a role in rituals at the grave. Fine glazed stoneware urns (see Figures 5.13–14), which appear for the first time in this period, may have held alcoholic drink.

If Panlongcheng was an Erligang citadel in far away Hubei, grave 2 (M2) at Lijiazui (Figure 2.22) must have been the resting place of its leader or some other respected person.²⁶ At nearly 4 × 3 m, it is the largest burial from the period at any site, north or south. Grave 2 had an earth ledge on four sides, both wooden chamber and coffin, as well as a waist pit. Fragmentary impressions of carving from the planks that made up the chamber walls recall the motifs of bronze decoration. Two human

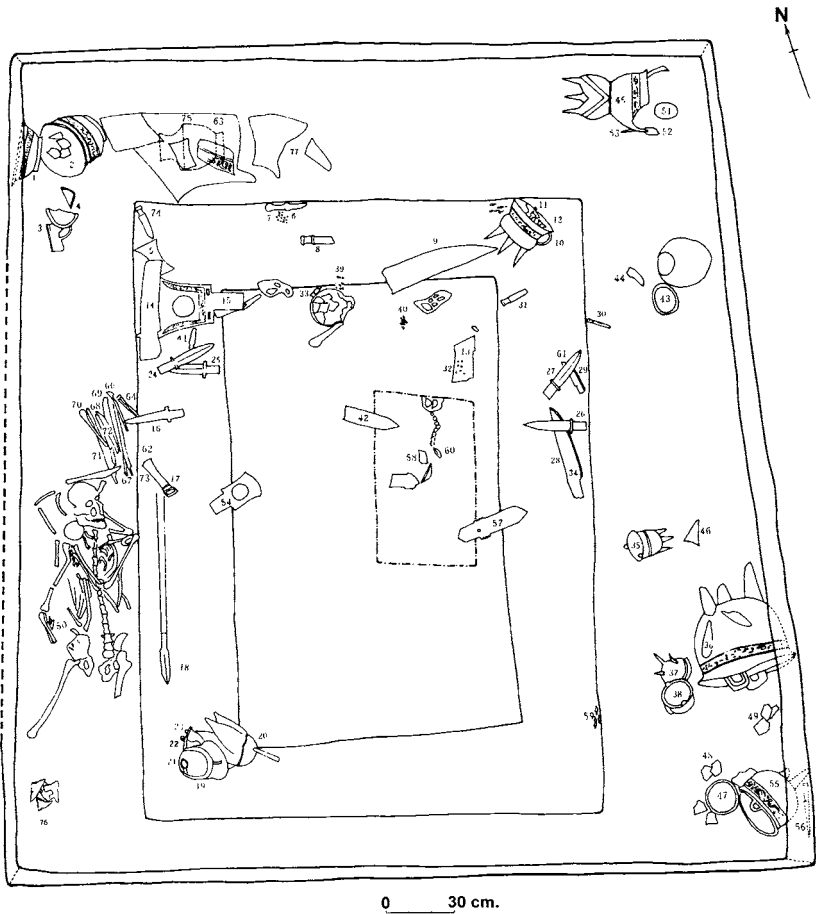


Figure 2.22. Plan of Lijiazui Grave 2, Panlongcheng, Hubei. *Panlongcheng* (2001), p. 154.

victims were placed on the west ledge, while a third one may have been placed on the roof of the chamber. Unidentified remains (possibly a dog) were found in the waist pit with a long jade *ge* dagger-axe (intentionally?) broken into three segments. Some eighteen bronze ritual vessels were recovered from this tomb, a number matched by only one other burial of the period, also at Panlongcheng. Larger bronze vessels used for food preparation or wine storage were placed on the ledge: for example, a steamer (*yan*) at the northeast corner, several *ding* tripods at

the southeast, and a *lei* wine container, *gui* bowl, and *pan* water basin in the northwest. The numerous wine serving vessels—four *jue*, three *jia*, *he*, and *gu*—were near the coffin inside the chamber. An even larger quantity of bronze weapons were invested, from a pair of broad-blade axes (*yue*), to multiple *ge* dagger-axes, *mao* spear points, and arrow points. All were found inside the chamber in proximity to the coffin. The size of this grave, its rich furnishings and large quantity of weapons, especially the two broad axes, lead to the conclusion this was a high-ranking person, perhaps the lord of this citadel.²⁷

Combining these data for walled settlements, building, and burials, we can sketch a Bronze Age warrior society spread across much of the North China macroregion and extending into both the Wei River valley of the Northwest and the Jiang-Han region of the Middle Yangzi. Rulers remain shadowy figures, although their palace-temple compounds are becoming better known and traces of their rituals may have been recovered. The warrior-elite that served them is better known, but still not in great detail. We glimpse occasionally their houses and more often their graves furnished with weapons and sets of ritual vessels, and the cost in human victims at their burials. The life of the great majority of the general population, from country folk working the fields to the artisans of workshops in settlements, is as hard to visualize as that of kings. Commoner cemetery tracts and workshop sites give but a smattering of data about how those persons may have lived and worked.

Erligang and the Regions

Chinese archaeology is administered and funded by the state, both at the national and provincial levels. While the Institute of Archaeology, Beijing, has teams in many provinces, for the Shang period it has worked mostly in the north. Its control of the Erlitou site and the Yanshi wall, for example, grew out of a commitment to the historic city of Luoyang, where it has had a work team since the 1950s. At Anyang, the Institute also has a permanent work station (see Box 12). But much Shang archaeology takes place elsewhere, and the archaeologists responsible are usually members of provincial institutes of cultural relics and archaeology. In Shandong, Hebei, Shanxi, Shaanxi, Jiangxi, Hubei, Hunan, and Sichuan, it is local archaeologists who excavate sites of the Erligang and Huan-bei periods. In Henan, the provincial institute is in charge of Zhengzhou. Thus a variety of viewpoints now contribute to our understanding of the Erligang Culture and period and its regional expressions. Any overall interpretation embracing all the evidence is a work in progress.

In Shandong and Hebei, provincial archaeologists see unambiguous

Erligang Culture sites, which they interpret as traces of “Shang people” (*Shang ren*).²⁸ They often trace the occupation of these sites over time from the prehistoric into the Late Shang period. At a greater distance away from Henan, these archaeologists identify certain sites as a mix of Erligang elements with other, local ones predominant. These sites are “local” (*tuzhu*) or “regional” (*difang*) cultures with roots in that province, societies contemporaneous with the Erligang Culture but not of it. While local societies may have borrowed or imitated some elements of Erligang Culture, for Hebei and Shandong archaeologists they appear to retain their separate identities. If remains of this kind are sufficiently well documented, a named archaeological culture will be posited, with its own position in the regional framework. Thus in peninsular Shandong, the Zhenzhumen Culture coexisted with the “Shang people” of the Erligang period, for example at Daxinzhuang near Jinan. In central and northern Hebei, the Lower Xiajiadian Culture coexisted with Shang inhabitants of Taixi. In each case, the frontier of the Erligang Culture can only be roughly delineated.

Following this same model, other regional archaeologists identify “islands” of the Shang/Erligang Culture amid a local culture (for example, Panlongcheng, Hubei, or Laoniupo, Shaanxi). Since most regions have not seen systematic regional surveys, the degree to which the site in question is truly isolated often awaits further fieldwork. The intensity of work in the Wei River valley probably justifies this view for a site like Laoniupo near Xi’an.²⁹ A variety of cultures seem to have coexisted there. Shaanxi archaeologists recognize a contemporaneous local culture exemplified by the Liujia site, (ancestors of the Qiang-Rong peoples?) as well as “predynastic Zhou” remains at sites like Nianzipo (Changwu County), Yijiabao (Fufeng County), and Zhengjiapo (Wugong County). The Erligang Culture presence seemingly first expanded and then contracted along the Wei River. Erligang Culture sites are also identified in southern Shanxi, at such outposts as Yuanqu and Dongxiafeng, a presence that continued into the Yinxu period. But in central and northern Shanxi, provincial archaeologists recognize clusters of sites (as in Shilou County) which they regard as the remains of non-Shang statelets like the Gui-fang or Tu-fang, known from Late Shang oracle-bone inscriptions as sometime adversaries of the Late Shang kings (see Chapter 5).

Hybrid Culture in Jiangxi

The results of interaction of the Erligang Culture and local cultures are illustrated by finds in the Gan Yangzi macroregion, modern-day Jiangxi. Recent work in the area of the Tongling mine (Ruichang County,

Jiangxi) has identified a habitation site about 2 km to the east named Tanshuzui.³⁰ Although data here are very preliminary, the excavators think they have found traces of an outpost of “Shang people,” perhaps for the nearby mine. As yet there is no evidence for a walled compound or indeed any elite presence. The need to exploit the ores of this region could have brought people from the north into this area. Over time their presence could have spurred developments among the local population.

The myriad interactions of an intrusive group and local communities would account for two hybrid archaeological cultures now recognized in Jiangxi: Wannian and Wucheng. The latter is named after a type site south of Ruichang in Zhangshu County (the former Qingjiang).³¹ Here a compound of about 60 hectares has been identified, with walls 5 m and more in height. Little detail about the site is available, however, although there is some evidence for bronze casting using stone molds. The Wucheng Culture is best known for a prolific and sophisticated ceramics industry producing glazed stonewares (see Chapter 5).

This industry was much in evidence at a truly spectacular find near the Wucheng site.³² In September 1989, peasants digging a sandbar called Dayangzhou near the Gan River south of Zhangshu and east of Wucheng uncovered a large scatter of bronze vessels and weapons (Figure 2.23). Some of the bronzes were taken home by the peasants, but that very night local authorities from Xin’gan County investigated and collected the purloined goods. After securing the site and drafting a plan, the Jiangxi Institute was authorized to conduct an excavation. Because the find spot was sandy, stratigraphic levels could not be established. The archaeologists cleared the finds with great care, however, using 10 cm levels, and concluded that they had unearthed a large tomb oriented east-west, a rectangle over 8 m long and about 3.6 m wide. Traces of a coffin west of center were located in the soil, as well as ledges at the east and west ends.

The deposits at Dayangzhou, Xin’gan, comprise the richest discovery in Shang archaeology since the find of the tomb of Lady Hao at Anyang in the 1970s (see Box 14). The contents, broken down by media, were

- (1) Bronzes: 48 ritual vessels; 4 bells; 51 agricultural tools and implements; 92 other craft tools; 232 weapons; and 48 odds and ends. Total 475 items.
- (2) Jades and hardstones: 33 ritual types; 7 ceremonial types; 712 ornaments and small pieces; 2 carvings. Total 754 items, plus about a thousand small beads.
- (3) Ceramics: 28 cooking vessels; 107 storage vessels; 4 miscellaneous. Total 139 items.



Figure 2.23. Artifact scatter at Dayangzhou, Xin'gan, Jiangxi. *Xin'gan da mu* (1997), pl. 1.

These furnishings stand apart from other burials of the Erligang Culture, but do not undermine identification of this find as a tomb. An unmatched quantity of bronze was complemented by the very large number of local ceramics, especially stonewares. Bronze ritual vessels and weapons include specific types and decoration created in the Erligang Culture and common during the Huan-bei period. Some bronze

objects display motifs or designs not present among northern finds. The casting and design of these objects are in no pejorative sense “provincial,” but in most cases they must have been produced in Jiangxi. The large quantity of jades, on the other hand, has no parallel in the period either in the Yangzi macroregions or the north. Few would hesitate, therefore, to assign this grave to a local chief or lord; most would deduce that person was probably not a transplanted northerner. The material possessions of this exalted person are instead characteristic of a hybrid culture, in which local and northern traditions were interbred.

The ritual assemblage emphasizes tripods associated with meat and grain offerings (*ding*, *fangding*, *li*, and *yan*, a total of 38 items). When ceramic tripods are added in, these categories are emphasized even more. On the other hand, the ubiquitous wine service types of the Erligang Culture—*jue*, *jia*, *gu*, *he*—are completely absent. The modest complement of bronze wine containers (*hu*, *lei*, *you*, and a ladle, a total of 8 items) was compensated for by the extensive numbers of ceramics. Four bells finish off the ritual types. The bronze weapons and tools are quite varied, and exceedingly numerous. The excavators enumerate 35 spear points, 28 dagger axes, 6 axes (*yue*), 123 arrow points, a sword, 15 knives, miscellaneous objects, and a helmet! (There were also 18 types of tools.) The sheer quantity of bronze objects in this tomb overshadows evidence from any other region in this same time period.

In addition to the unusual composition of the ritual assemblage, the design of individual types merges disparate traditions.³³ A large *fangding* (height 97 cm) (Figure 2.24) is a close cousin to *fangding* recovered from ritual deposits at Zhengzhou (see Figure 2.12). Tigers on its loop handles, however, announce this as a local casting. Shallow round *ding* with flat legs that embody an animal motif also carry such animals on their handles. A huge *yan* steamer (height 105 cm) has a four-legged design, with deer (?) on its loop handles (Figure 2.25). Bronze *li* tripods range in shape and decoration from conventional varieties common in the north, for example at Taixi, to a specimen that mimics local stonewares (Figure 2.26). Many Dayangzhou vessels have analogues of the Huan-bei period from other macroregions: several round *ding*, and a *gui* (here called a *pan*), *lei*, *hu*, and *you*. On the other hand, a few vessels appear more advanced in design, both shape and decoration. A square *you* with channels running through its body (Figure 2.27), a *hu*, and a helmet all might be imports, perhaps bestowed by a Late Shang ruler in Henan. These latest objects establish a probable date for the burial contemporary with the reign of Wu Ding at Anyang (and hence, tomb 5). On the evidence of this assemblage, the bronze industry of the

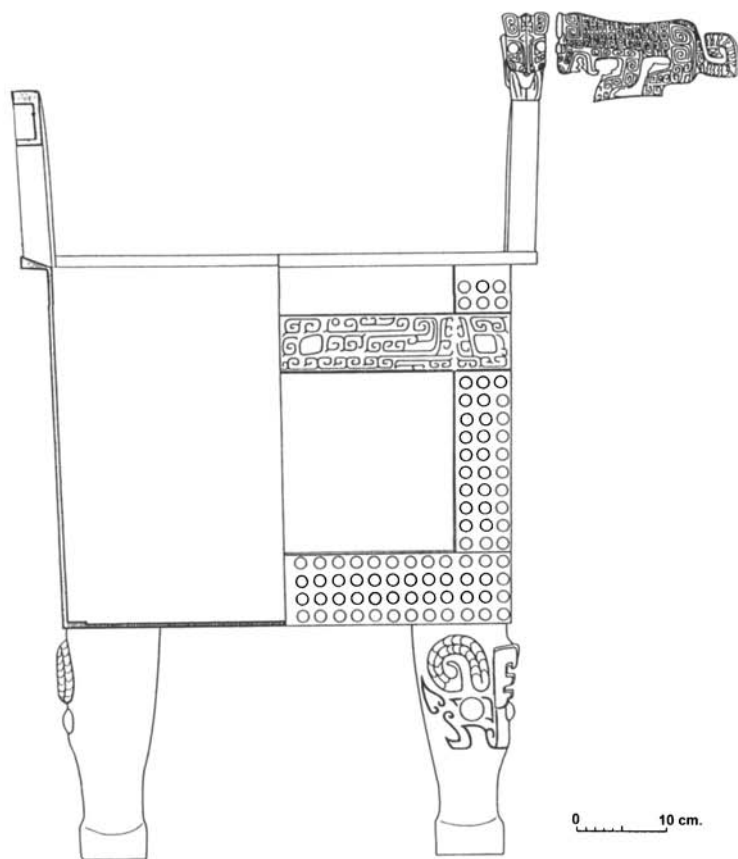


Figure 2.24. Dayangzhou *fangding*, height 97 cm. *Xin'gan da mu* (1997), p. 33.

Wucheng Culture grew from a late Erligang base and accommodated local designs and motifs.

The many parallels to finds in other regions testify to a network that circulated both objects and information regarding technology and ritual beginning in the Erligang period and becoming even more extensive in the Huan-bei period. Finds in Anhui, Hubei, Hebei, Shanxi, and Shaanxi echo specific types and decoration also found in the Dayangzhou tomb (Figure 2.28). Whether the find spots of such vessels were once attached to a local settlement often remains unclear. At Panlongcheng, Taixi, and Laoniupo, settlements that appear to represent the Erligang Culture have been investigated. Elsewhere, such as Anhui,

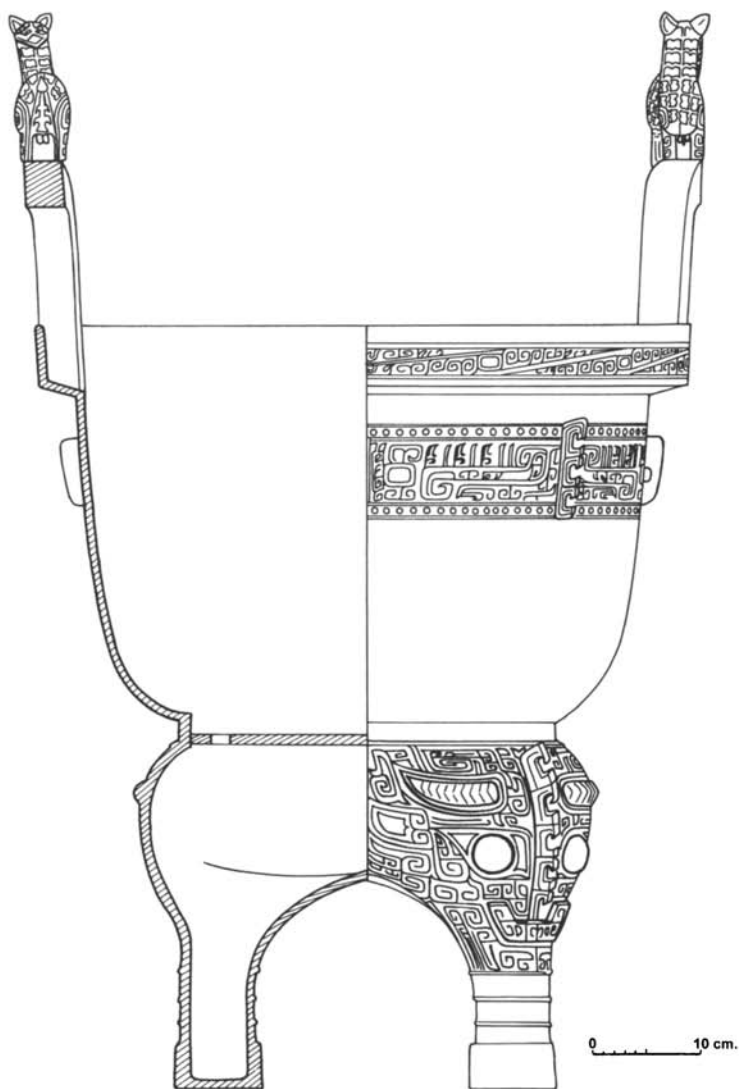


Figure 2.25. Dayangzhou yan (*xian*), height 105 cm. *Xin'gan da mu* (1997), p. 58.

central and northern Shanxi, and northern Shaanxi, we have fewer clues during this period by which to evaluate local populations. A smattering of “warrior graves” across Shaanxi, Shanxi, Hebei, and Beijing can be dated to the Huan-bei period. Some of their furnishings, for example gold earrings and bracelets, suggest affinities to Northern Zone cultures, but otherwise their contents suggest links to the culture of

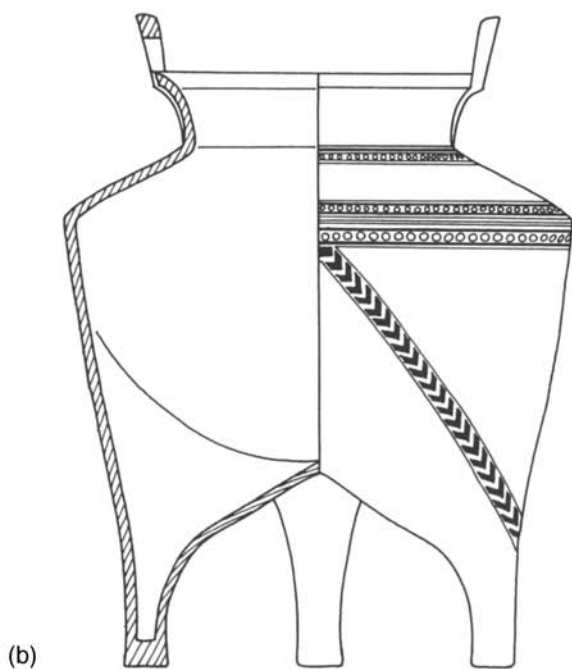
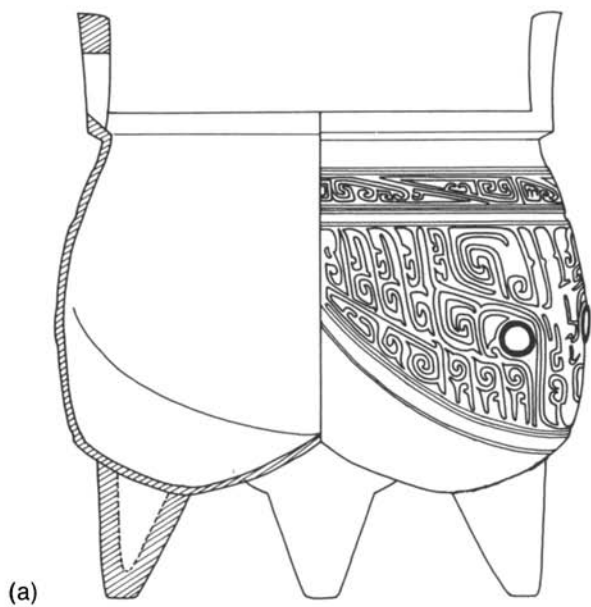


Figure 2.26. Dayangzhou *li*: (a) XDM 32, height 16 cm; (b) XDM 37, height 39 cm. *Xin'gan da mu* (1997), pp. 52, 56.

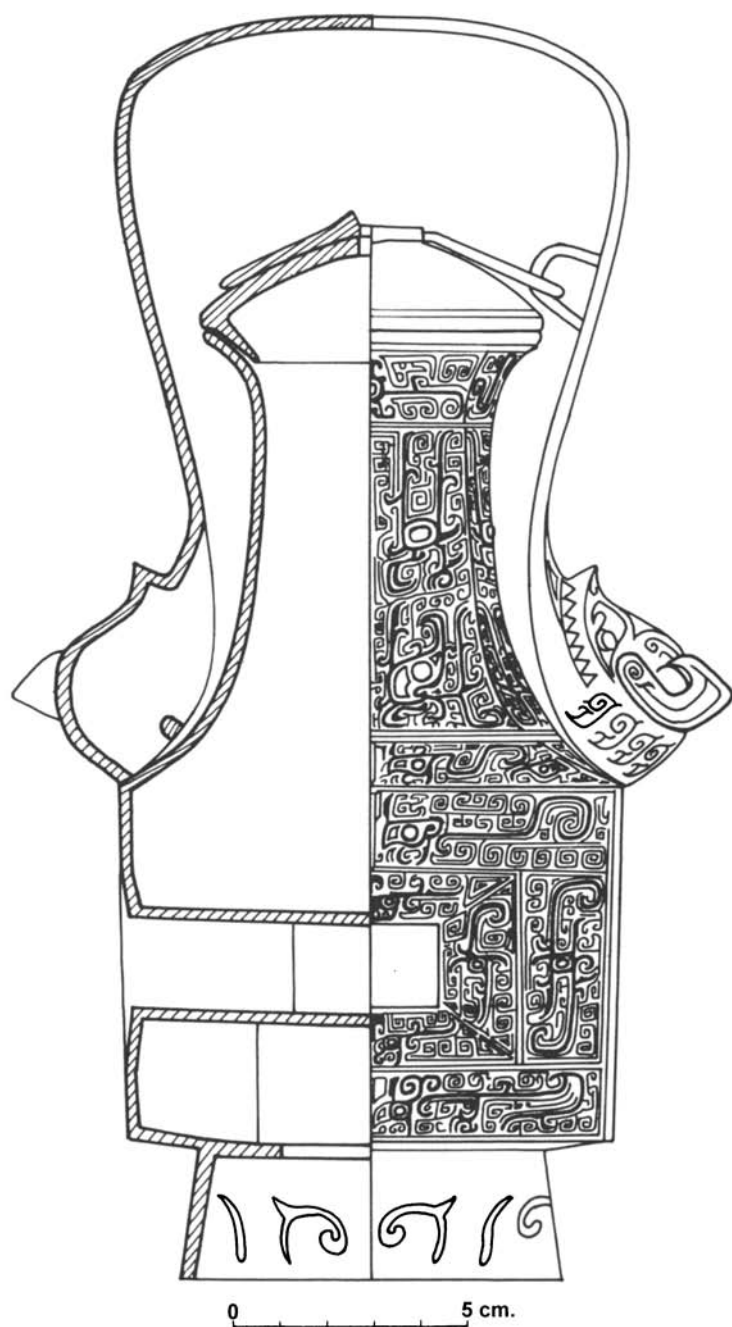


Figure 2.27. Dayangzhou *fangyou*, height 28 cm. *Xin'gan da mu* (1997), p. 70.

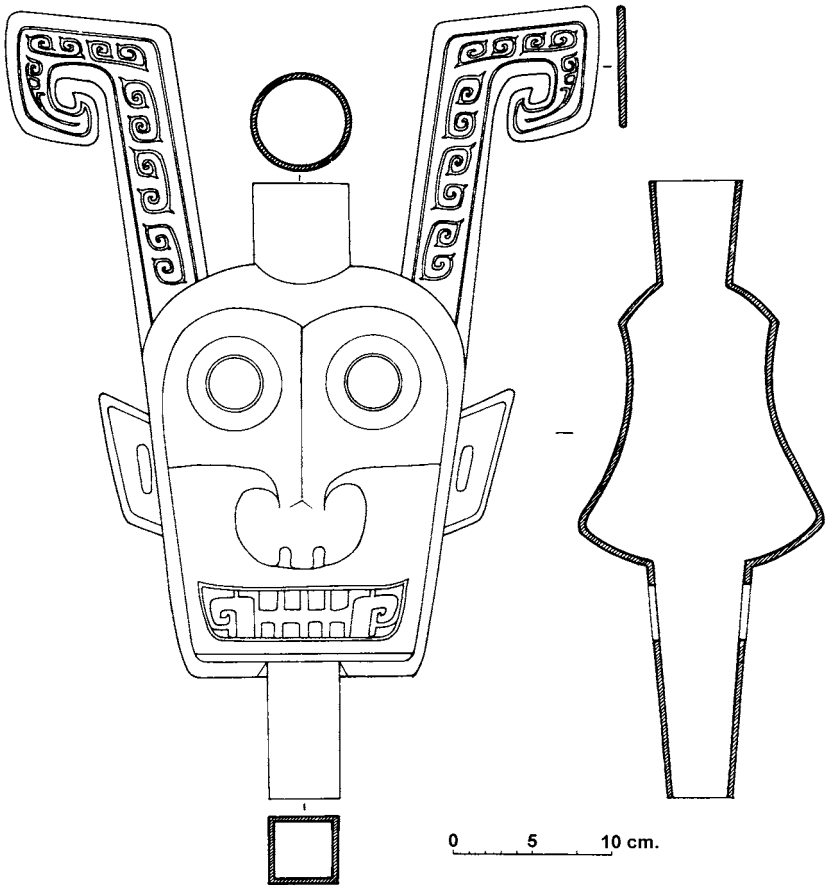


Figure 2.28. Dayangzhou bronze head, height 53 cm. *Xin'gan da mu* (1997), p. 132. This head blends facial features—nose, cheek bones, eyes, ears—with other exaggerated attributes—the curled fangs on the lower jaw, the hooked horns above the ears—that transform it into something not human. With sockets at both top and bottom, we can imagine this object mounted on a pole and perhaps sprouting feathers or some other topknot. Is this mask imagery related to the examples from Sanxingdui (Figures 5.18–19), only slightly later in date?

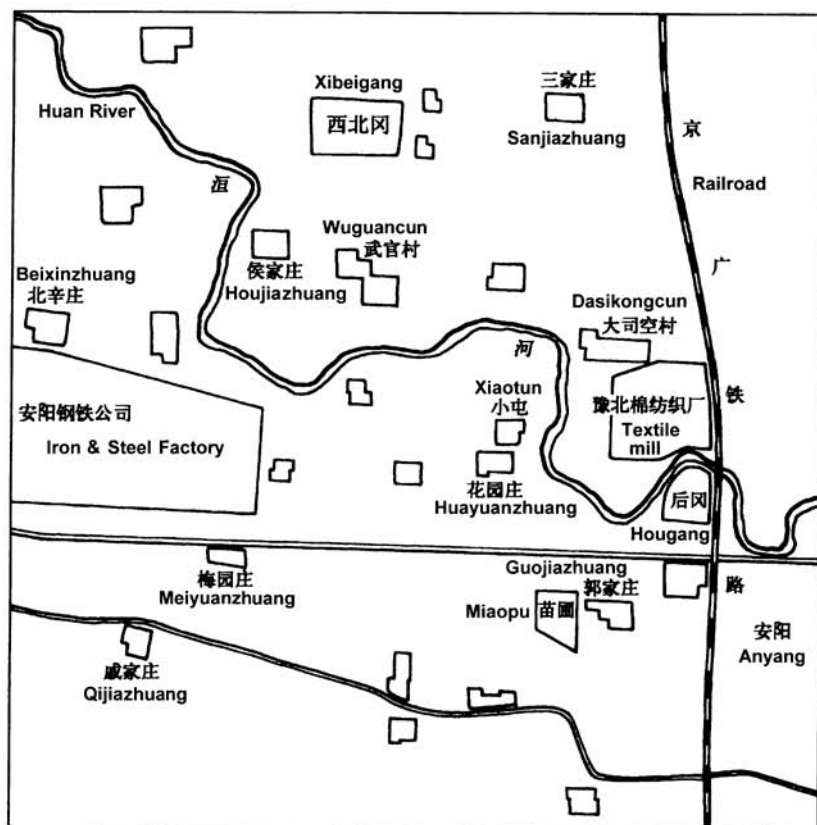
Henan. By definition, a network is not comprised of one-way links. Goods and ideas radiated from major centers and also moved from outlying regions toward the centers in Henan. Distant points such as Shaanxi (northwest) and Jiangxi (southeast) could be linked to each other, either via major centers or more directly. The richness of the bronze industry in the early reigns of Yin Xu, as represented by the tomb

of Lady Hao, which postdates most of the Dayangzhou finds, must derive in part from contacts across long distances. For example, the use of animals as appendages on Fu Hao ritual vessels (see Figure 4.14) probably betrays knowledge of the south, including Jiangxi. In this sense, Shang culture at the royal center itself became a hybrid.

Chapter 3

The Shang Kings at Anyang (c. 1300–1046 B.C.E.)

Our discussions of the Erlitou and Erligang Cultures established the pedigree of the archaeological culture known from the large complex of sites near Anyang, in northern Henan province (Map 6). Work here began at about the same time the discovery of the Longshan type site took place. But whereas the Shandong excavations were limited to two seasons, campaigns at Anyang proceeded for fifteen seasons over a decade (1928–37). More than the better-known investigations at the “cave home of Peking man,” the work at Anyang had a decisive impact on the definition, theory, and practice of archaeology in China. From the outset, Anyang was a Chinese project directed by the newly established Academia Sinica (Zhongyang yanjiu yuan) through its Institute of History and Philology (Lishi yuyan yanjiu suo). Motivated by the desire to harvest oracle-bone inscriptions at their source, the Archaeology Section (Kaogu zu) pursued an historical agenda: to recover epigraphic and material remains of the Shang kings. While field techniques were based on practices in Europe and America, they were modified to suit the environment of North China, conditions particular to Anyang, and the goals of Chinese scholars. The excavators themselves blended traditional scholarship with modern archaeology. Dong Zuobin, for example, who revolutionized study of the inscriptions, conducted the first trial excavations in fall 1928, and remained active in the field thereafter. Li Ji (Li Chi), who took charge from 1929, on the other hand, was a Harvard-trained anthropologist. Liang Siyong, similarly trained, oversaw important work at Hougang and the royal tombs. Li and Liang and their teams created the theory and practice of a Chinese Bronze Age archaeology conceived as an adjunct to history. A younger generation brought in toward the end of these campaigns, including Hu Houxuan and Xia Nai, went on to assume prominent roles in archaeology and epigraphy from the 1950s through the 1990s (Box 11).



Map 6. Late Shang sites near Anyang, Henan.

Box 11 Anyang Archaeologists

The fifteen seasons of excavations at Anyang (1928–37) were the principal training ground for the first generation of Chinese archaeologists. They created Bronze Age or Shang archaeology through their efforts in the field and the research and publications that followed. Younger members of these campaigns went on, in turn, to play major roles in the institutional development of archaeology in the PRC after 1949. The names of Anyang excavators read like a *Who's Who* of twentieth-century Chinese archaeology.

Li Ji (Li Chi, 1896–1979) was trained at Harvard in anthropology (Ph.D., 1923) and returned to China to teach. In 1926 he conducted the first excavation organized and carried out independently by a Chinese scholar at the Neolithic site of Xiyincun (Xiaxian, Shanxi). Li joined Academia Sinica in 1929 to head its Archaeology Division, and took charge of the Anyang excavations from that date. He also supervised publication of the first excavation reports: *Anyang fajue baogao* (1929–33), and the several series of monographs devoted to the sites and finds from Yinxu. He himself authored the volume on ceramics (1956), and (with Wan Jibao), a five-volume work on bronze vessels (1964–72). In English, Li published *The Beginnings of Chinese Civilization* (1957), a series of lectures, and *Anyang* (1977), a memoir of the excavations. (Li's student K. C. Chang is profiled in Box 4.) Li was undoubtedly the key figure in Shang archaeology in the twentieth century.

Dong Zuobin (Tung Tso-pin, 1895–1963), while best known as a scholar of oracle-bone inscriptions, also participated in eight seasons at Anyang, including the first (1928). A native of Henan educated in Peking, Dong took charge of inscriptions excavated at the site and edited their publication, *Yinxu wenzi jibian* (1948) and *Yibian* (1948–53). Dong's scheme to periodize inscriptions came as a direct result of excavating intact shells in 1929 and 1934. Like Li Ji, he worked on Taiwan after 1949.

Guo Baojun (1893–1971), another Henan native, took part in the first season as representative of his home province. Guo excavated at many other sites including Chengzilai, Xincun, and Shanbiaozhen (Zhou-period sites). In 1950, he took charge of the large tomb at Wuguancun, at the east end of the royal cemetery, as well as other sites in Henan. He also helped establish the archaeology specialization at Peking University.

Liang Siyong (1904–54), son of the intellectual Liang Qichao and brother of architectural historian Liang Sicheng, was trained at Harvard in archaeology (M.A., 1930). He joined the Yinxu excavations after participating in the two seasons at Chengzilai, thereafter taking charge of work at Hougang and Xibeigang. He joined the new Institute of Archaeology (Box 2), serving as its deputy director prior to his untimely death.

Hu Houxuan (1911–95), trained at Peking University, joined the excavations for seasons 10 and 11 at Xibeigang (1934). He participated in the preparation of the first monograph on inscriptions (*Jibian*), and after 1950 joined the Institute of History, Beijing.

He has been the most influential scholar of oracle-bone studies in the PRC, and was charged with editorial supervision of the principal corpus of oracle-bone inscriptions, *Jiaguwen heji* (1978–82, thirteen volumes).

Xia Nai (Hsia Nai, 1910–85), joined the excavations for a season in 1935 before studying archaeology at the University of London, where he specialized in Egyptology. After 1950, he directed excavations in Huixian (Henan), Changsha (Hunan), along the Yellow River, and at the Dingling Ming tomb near Beijing, all early efforts of the new Institute of Archaeology. He served as director of the institute from 1962–82. Xia Nai became the most influential archaeologist in the PRC, promoting the development of a systematic time-space framework for prehistoric cultures and the application of scientific techniques like carbon-14 dating.

After more than seventy years of extensive investigation, the Anyang sites, historically known as Yinxu, “the ruins of Yin,” stand at the beginning of Chinese history. With the first Shang king documented in the oracle-bone inscriptions, Wu Ding, we enter a world in which ancient traditions and modern discoveries intersect. The historical reality of the nine kings known retrospectively as the Shang can hardly be challenged. While their ancestry remains clouded, their material culture can be traced to the Erligang and Erlitou Cultures of Henan. Some portion of the Erligang Culture and horizon should represent the ancestors of the Shang kings recorded in the Anyang “shell-and-bone writings” (*jiaguwen*). Thus the shift from prehistory (or protohistory) to proper history can be examined at Anyang. In a recent survey of archaeologists in China, the manifold discoveries at Anyang were voted the most important archaeological work of the last century.

Exploration of Yinxu

Dong Zuobin arrived in Zhangde fu, the seat of Anyang County, in August 1928, hoping to find the source of inscribed oracle-bones. Although an amateur in archaeological field methods, he conscientiously inquired among local literati and peasants alike. Eventually, with the aid of a boy from the village of Xiaotun, northwest of the city, Dong located pits where shells and bones had been dug up. Later, in October, Dong was able to recover a modest number of bones himself, and in the process recorded the first “scientific” excavation. Local conditions, Dong

concluded, suggested that the oracle-bones had not been exhausted in the three decades since a Beijing official, Wang Yirong, had first recognized the incised marks on shell and bone fragments as archaic script. Tradition says that Wang found these marks in 1899 in a packet of “dragon bones” obtained from a Chinese pharmacy. Whether or not that story is true, within the decade other scholars with epigraphic and antiquarian training assembled collections of fragments and published them. Sun Yirang (1848–1908), Luo Zhenyu (1866–1940), and Wang Guowei (1877–1927) exploited the inscriptions for their contents. Wang in particular quickly established their manifold connections to the late Shang kings as listed in Sima Qian’s *Historical Records* (see Box 3). By 1908 or 1910, Luo Zhenyu had determined their likely origin near Anyang. Thus when Dong Zuobin first dug at Xiaotun in 1928, it was the culmination of nearly thirty years of scholarly interest.¹

The early seasons at Xiaotun (1928–29) amounted to an exploratory phase, as the archaeological team headed by Li Ji surveyed the site and experimented with a variety of probing and excavation techniques. Long narrow trenches were cut through various areas around the village, but with indifferent results. A preliminary understanding of stratigraphy was among several accomplishments of this phase. Hard-packed earth encountered in several trenches, interpreted as flood deposits, eventually led to the identification of the palace-temple foundations. Several burials yielded the first scientifically-excavated bronze vessels. Clay mold fragments would eventually allow scholars to reconstruct the piece-mold casting process. And a set of four large plastrons inspired Dong Zuobin to create a pioneering scheme for periodizing inscriptions. Work was interrupted in 1930–31 by local bandits, an interval the excavators used to explore the Chengzhiyai site in Shandong.

During seasons 4–9 (1931–34) the team began a more thorough exploration north of Xiaotun village. A permanent station point was established at the village temple, and the area, dubbed Locus North, was subdivided into zones (A–E, later F–I). Since the supposed “flood deposits” were regular in shape, with squared corners and straight edges, Guo Baojun realized they were man-made foundations created by pounding the soil hard (*hangtu* in local speech; see Box 8). Guo identified river cobbles spaced at intervals around their perimeters as bases for posts of wooden frame structures. Work also began outside the zones north of Xiaotun, notably at Hougang, a mound between the village and the Anyang train station. Here Liang Siyong found a stratigraphy in which Yangshao remains were overlaid by Longshan ones, and Shang strata topped those two. Hougang also yielded a segment of rammed earth wall similar to Chengzhiyai, and a ramped tomb unlike the small pits or burials known until then from Locus North.

Local informants told the archaeologists of rich finds made by looters in the off-season across the river from Xiaotun at Xibeigang (“north-west ridge”). Liang Siyong promptly located four large quadrate tombs at this locale. Seasons 10–12 (1934–35) dedicated to these tombs were a highpoint in the prewar campaigns, employing more laborers and excavating more artifacts than ever before. In addition to eight tombs with four ramps each, several smaller ramped tombs were excavated along with twelve hundred sacrificial pits. These tombs and pits held the first evidence that human sacrifice flourished during Shang times. While all of the large tombs had been looted on a grand scale, their remnants were nonetheless impressive: large four-legged bronze cauldrons; bronze helmets and spear points; traces of carved, lacquered, and inlaid chambers and shields; marble sculptures and bone carvings (see Figure 3.18).

Further work (seasons 13–15, 1936–37) was halted prematurely by the outbreak of hostilities with Japan. The focus was again Locus North, where 10 × 10 m squares were exposed in Zones B and C, the heart of the foundations. In addition to over fifty foundations of many sizes and shapes, a large number of storage and refuse pits, sacrificial burials, and new inscriptions were recovered. One pit, YH127, opened at the final hour in season 13, yielded seventeen thousand inscriptions, most on plastrons from the period of Wu Ding, the first king to divine at Anyang. The sheer quantity of features and artifacts recorded and recovered during the final six seasons, from foundations and tombs to pottery, oracle-bones, bronzes, and human crania, became the primary evidence that the first generation of Anyang archaeologists would analyze and publish for the rest of their careers.

A recent synthesis by the Institute of Archaeology, which inherited the site and continues to work it, tabulates the achievements of the first fifteen seasons as follows:

Area: 46,000 sq m uncovered at eleven loci

Features: refuse and storage pits, semisubterranean dwellings, fifty-three surface foundations, water ditches; eight four-ramp tombs, two two-ramp tombs, more than 1000 sacrificial pits, and several hundred small burials at Xiaotun, Dasikongcun, and Xibeigang

Inscriptions: 24,918 fragments

Artifacts: thousands of items of bronze, ceramic, bone, shell, ivory, stone, and other materials

Most of these artifacts travelled from Anyang to Nanjing to the southwest and then back to Nanjing during and after the war (1937–45). Some items, including the bulk of the pottery, sadly, were jettisoned. More prestigious finds like inscribed shell and bone and bronze vessels were saved, and eventually moved to Taiwan with Academia Sinica. Some

of the archaeologists followed, while others remaining behind to continue their careers. From the 1950s through the 1970s, scholars on Taiwan (Li Ji, Dong Zuobin, Zhang Bingquan, Shi Zhangru, and Gao Quxun) published a large quantity of the prewar data: oracle-bone inscriptions, bronze vessels, records of the foundations and tombs. These discoveries describe Anyang as the last Shang capital, the “ruins of Yin” as known to traditional historiography. Until the 1950s, the Bronze Age seemed to appear in North China with this sudden florescence at Anyang. All major traits of a civilized society were in evidence: writing, urban settlement, monumental architecture, bronze metallurgy, and class society. In their first major enterprise, Chinese archaeologists had discovered their own historic roots.

After 1949, the first excavation under the new government took place at Anyang, with renewed work at the east end of the royal tombs near Wuguanqun. Other sites were explored in more piecemeal fashion during the 1950s by the Institute of Archaeology and by cultural relics teams from Henan province. In 1959, however, a permanent Work Station (Box 12) was established by the institute and charged with the exploration and conservation of the sites. Staffed by senior members of the institute and a cohort of recent graduates from Peking University, the Work Team set about surveying the entire area, establishing its stratigraphy, and creating ceramic seriations. Over the ensuing decades, this second generation of Anyang archaeologists created our present

Box 12 The Anyang Work Team

The Institute of Archaeology established the Anyang Work Team in spring 1958 under the supervision of Deputy Director Yin Da (also known as Liu Yao, 1906–83), one of the first generation of excavators. In fall 1959, a field station for the team was constructed on a plot immediately west of Xiaotun village. This station houses the team members, and provides needed storage and other support facilities. A small staff of technicians is also assigned, and recently improved displays have been added. Personnel for the team were drawn from the ranks of the institute, including a cohort of recent graduates from Peking University (Figure 3.1). Their initial efforts led to important discoveries outside the scope of Shang archaeology, such as the nearby Xiaonanzhai Paleolithic site, and two phases of the Yangshao Culture unearthed at the Dasikongcun



Figure 3.1. “Second generation” archaeologists. Robert L. Thorp. In this snapshot of former members of the Work Station, taken in 1998 at the 70th anniversary of the Anyang excavations are (front row, from left), unidentified member, An Zhimin, Zhou Yongzhen, Zheng Zhenxiang, and Chen Zhida; (back row), Yang Baocheng, Yin Weizhang, Yang Xizhang, Gao Guangren, and Zhang Changshou.

and Hougang sites. In the Anyang suburbs, surveys by the team uncovered evidence of an Erligang period settlement at Meiyuanzhuang, and the extensive bronze casting site at Miaopu North. With the exception of a short hiatus in the mid-1960s, the Cultural Revolution, the work of the Anyang team has continued steadily to the present.

Perhaps the most important contribution of the Work Team began with excavations at Dasikongcun, across the river from Xiaotun in the early 1960s. Here analysis of stratigraphy, grave goods, and a very few oracle-bone inscriptions led to creation of a ceramic periodization for ordering and dating the Yinxu finds. This sequence has since been refined with work at other sites, including Miaopu North, Locus South, and the West Zones (see Figure 3.14). It is the basis for the Yinxu periods I–IV scheme used in this volume (see Table 3.1). This seriation addressed a glaring omission among the

efforts of the 1928–37 campaigns and removed a major obstacle to further research at Anyang.

The Work Team has been responsible for many notable discoveries since its creation: oracle-bones at Locus South (1973, Liu Yiman and Cao Dingyun), tomb of Lady Hao (1976, Zheng Zhenxiang and Chen Zhida), extensive tracks of sacrificial burials at Xibeigang (1976, Yang Xizhang and Yang Baocheng), the West Zone cemeteries, D Group foundations at Locus North (1988, Zheng), and so on. Most recently, the Work Team has been collaborating with the Anyang Project, a multidisciplinary survey of the Huan River region with the University of Minnesota-Duluth. Processing such a huge volume of materials has been extremely time-consuming, yet the members of the team collectively and individually have nonetheless repeatedly published excavation reports as well as other, synthetic works. Most notable are their *Archaeology Excavations and Researches in the Yin Ruins* (*Yinxu de faxian yu yanjiu*, 1994), an encyclopedic overview of all work accomplished since 1928, and a corpus of excavated bronzes, *Yinxu qingtongqi* (1985).

TABLE 3.1. Yinxu Periodization

This periodization for the Yinxu sites establishes a relative and “absolute” chronology for the archaeological strata, features, and pottery encountered there. In this book, features and finds are dated accordingly whenever possible.

Period	Kings	Dates
<i>Yinxu I</i>		
Early	Pan Geng, Xiao Xin, Xiao Yi	1300–1251
Late	early Wu Ding	1250–
<i>Yinxu II</i>		
Early	late Wu Ding	–1192
Late	Zu Geng, Zu Jia	1191–
<i>Yinxu III</i>	Lin Xin–Wen Ding	–1102
<i>Yinxu IV</i>	Di Yi–Di Xin	1101–1046

Sources: Institute of Archaeology (Zheng Zhenxiang), *Yinxu de faxian yu yanjiu* (1994), pp. 26–39; “Xia Shang Zhou duandai gongcheng 1996–2000 nian jieduan chengguo gaiyao” [Xia Shang Zhou chronology project: summary of results from 1996–2000], *Wenwu* 2000, 12:49–62.

picture of the site, its character and extent, its growth over time, and its material culture. Many original members of the Work Team, now retired, continue their research even today (Figure 3.1). Most of their contributions have appeared in archaeological journals, but several major monographs also report findings. These publications built on the foundational efforts of the first generation, but also thoroughly revised and expanded them. With excavations at Dasikongcun, Miaopu North, and the West Zones from the late 1950s through late 1970s, the Work Team devised a pottery seriation from habitation sites and burials as a yardstick for the relative dating of features and artifacts (Table 3.1). They reinvestigated all locales explored in the pre-war campaigns and ranged further, creating a more thorough and extensive picture of the complex and its growth. More foundations have been located near Locus North, additional tracts of sacrificial pits documented at Xibeigang, workshops for bronze and bone production unearthed, and cemetery tracts explored in most directions away from the palace core. As we consider the major components of Yinxu below, the contributions of the Work Team dominate our discussion. Today one can speak of an area of some thirty square kilometers that flourished during the reigns of nine historic Shang kings.

“Great Settlement Shang”

Today Anyang is a bustling city of more than half a million people, small by Chinese standards, and the center for a district of the same name that extends across the panhandle of northern Henan. Connected to points north and south by the Jing-Guang (Peking-Canton) railroad, the city is now also served by a new expressway that follows much the same route. Although agriculture predominates in the district, this is also an industrial landscape, with a major iron and steel factory to the west of the city, encroaching on the protected Yinxu sites. The Huan River that runs through Yinxu has been dammed and channeled (Figure 3.2), with a reservoir along its upper reaches in the foothills west of Anyang. This is a flat loess terrain between the Taihang Mountains on the west and the present course of the Yellow River to the east. Dry and dusty most of the year, the summer season brings violent thunderstorms. Local farmers plant two crops of wheat and vegetables in the rich soils. In recent decades, their efforts at leveling fields for more efficient cultivation have remade the landscape. In the process many archaeological sites have been destroyed. Brickworks have been especially harmful. The organic earth prized for brick making is more often than not a one-time habitation site. The pressures of population and production steadily take their toll, in spite of the efforts of the state to protect the sites. Yinxu was placed on



Figure 3.2. Aerial view of Huan River and Yinxu. *Yinxu de faxian yu yanjiu* (1994), pl. 1. This view taken in the 1980s shows the Huan River flowing west to east (left to right) and bending southeast. The Anyang Work Station is right of center, with an open space between it and Xiaotun Village on the east. Huanyuanzhuang with its blocks of new houses is the large square area south of Xiaotun. The Palace Zone (now Yinxu Archaeological Park) is northeast of Xiaotun. The village of Xinzhuang is southwest of the Work Station, while Sipanmo lies northwest of the Work Station. Compare Map 6.

the national register in 1961, and more recently still has been declared a World Heritage Site.²

The combined efforts of several generations of Anyang archaeologists yield a picture of a vast ceremonial center spread over the landscape on both sides of the Huan River. Shang sites extend west from Anyang City for some six kilometers. The north-south dimension is about five kilometers. The highest ground in this area is at the bend of the Huan River, designated Xiaotun Locus North, and at “northwest ridge” (Xibeigang), the two major foci of the 1928–37 excavations. The foundations at Locus North are plausibly regarded as the core of the ceremonial center. Shi Zhangru, who made their reporting his life work, regarded them as the palaces, temples, and sacrificial precincts of the Shang kings. We now know that there are more than the fifty-three foundations Shi documented from prewar excavations (Figure 3.3), and that this zone extends further west and south. This core area is bounded by a significant ditch that delimits its west and south flanks. The course of the river similarly defines the north and east sides. This “palace zone,” which grew rapidly

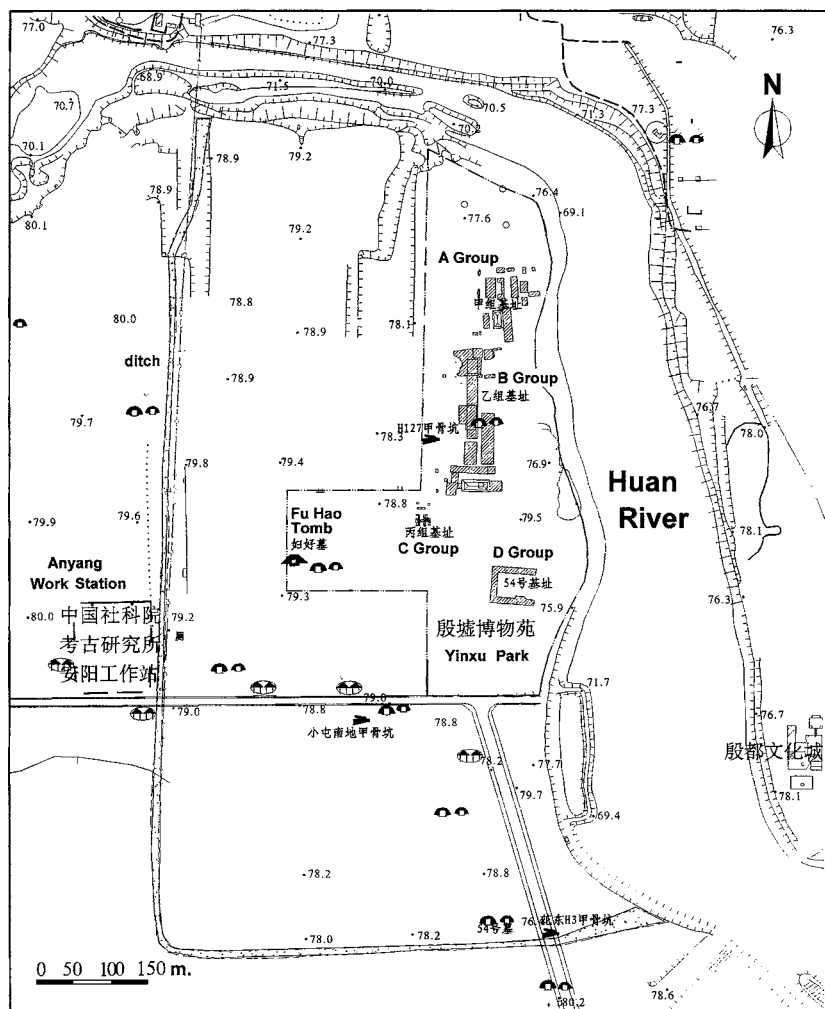


Figure 3.3. Palace zone, Xiaotun Locus North. *Yinxu* (2001), p. 56.

from the time of Wu Ding, was occupied continuously throughout the dynastic period, but also changed in some areas from burial or sacrificial use to residential use. Workshops were also located within the ditch.

Across the river on the northwest ridge were two arrays of large tombs, most with four ramps, adjoined by extensive tracts of sacrificial pits holding animal and human victims. Most of this royal cemetery has been

probed, and it is reasonably certain that all the large ramped tombs have now been located (Figure 3.4). The royal cemetery stands in sharp contrast to several immense tracts of burials for the petty elite. Their cemeteries were first identified at Dasikongcun, across the river from Xiaotun, and at Miaopu Locus North, one kilometer south of Xiaotun. During the late 1960s–1970s, even more extensive cemetery tracts were uncovered west of Xiaotun in the area occupied now by the Anyang Steel and Iron factory. More recently still, southern zones beyond the protected area of Yinxu have been explored by the Cultural Relics Work Team of Anyang City. Thousands of tombs have been located in these several areas, and bear witness to considerable growth of the center in the late reigns.

Smaller settlements and workshops were sprinkled across the landscape, but they remain less well known than the evidence for large foundations and burials. The region was occupied to a limited extent as early as the Erlitou and Erligang Cultures. But not until the following period did the Anyang area become a center of some size. The walled Huan-bei site (see Box 13) is actually larger than either the Zhengzhou Inner wall or Yanshi wall, and could be evidence of the first Shang kings to locate here. Work at Huan-bei is still in progress. Other remains contemporary with the Huan-bei site, however, are rare: some burials with bronzes at Sanjiazhuang (west of Huan-bei) and Xiaotun Locus North, and some finds of pottery at Meiyuanzhuang, for example. With the reign of Wu Ding, however, the focus of the region shifted across the river to Xiaotun Locus North and the contemporaneous royal tombs of Xibeigang. Although the extensive cemetery tracts suggest a sizeable population, where residential communities were located is not clear. Workshops inside the ditch at Locus North and far afield to both south and west evidently served royal and nonroyal populations alike.

A pioneering survey of the upper and lower reaches of the Huan River in the 1960s first placed this complex in its broader regional context. New survey work in the late 1990s, a Sino-American collaboration, has further enhanced our understanding of how the region developed.³ The Huan River drainage was fairly densely inhabited during the Longshan Age, with several local centers among the thirty-plus sites surveyed. While there were no nearby competing centers during the Shang royal occupation, we know the countryside supported dispersed populations at several dozen sites along the river (Figure 3.7). Many of these sites remained occupied after the fall of Shang, even though the ceremonial core was by then presumably abandoned. Although settlement data are now more extensive than comparable information for either Erlitou or Zhengzhou, it remains impossible to make plausible estimates of the population of the Anyang region during its prime.

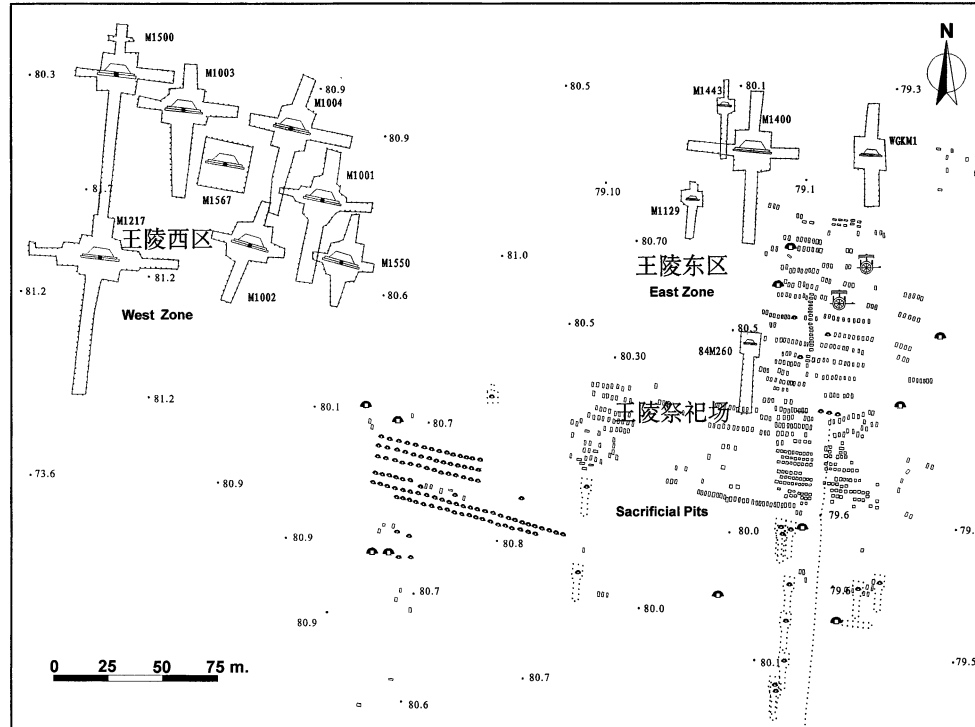


Figure 3.4. Royal tombs, Xibeigang. *Yinxu* (2001), p. 57.

Box 13 The Huan-bei Wall

As data for settlements distributed over much of China Proper grew in the 1970s, 1980s, and 1990s, it became clear that a gap existed between the height of the occupation at Zhengzhou and royal occupation of the sites near Anyang (see Table 2.1). Rich sites from this intervening period were found as far north as Gaocheng, Hebei, and as far south as Xin'gan, Jiangxi, with a smattering of sites and finds over much of North China. First characterized as a "transitional period" by scholars such as Robert Bagley and this author, Chinese archaeologists gradually developed a similar view. Among the finds crucial to this realization were several discoveries of bronze vessels near a village north of Anyang, an area called Sanjiazhuang. As a part of a regional survey conducted cooperatively by the Anyang Work Team (see Box 12) and the University of Minnesota-Duluth, the area east of Sanjiazhuang was probed and a trial excavation opened in 1997. Continued probing suggested that there was more than simply a few random graves and pits with bronzes in this area. Moreover, pottery retrieved from the trial trench was demonstrably later than that associated with the late occupation of Zhengzhou, and earlier than the earliest (Yinxu I) pottery at other nearby Anyang sites.

In 1999, traces of a wall were detected in the area of a nearby village called Huayuanzhuang (another village of the same name lies just south of Xiaotun). Designated as the Huan-bei ("north of the Huan river") Shang wall, the compound is almost square, 2,000–2,200 m on a side oriented about 13 degrees east of north (Figure 3.5). Like Yanshi, the walls lie under the modern surface. Thankfully the area is largely open fields and an air strip, although it is crossed by the Jing-Guang railroad and a highway running north-south. In area, this is the largest walled site considered so far, at 470 hectares (300 hectares for Zhengzhou and 200 hectares for Yanshi; a hectare is 10,000 sq m).

Efforts in 2000–2001 yielded even more impressive results. Probing isolated a cluster of some two dozen pounded earth foundations in the south-central portion of the walled area. Excavation then uncovered the footprint of a large palace compound measuring some 174 m east-west and 90 m north-south, the largest structure ever discovered at an early Bronze Age site (Figure 3.6). As this is written about two-thirds of the compound has

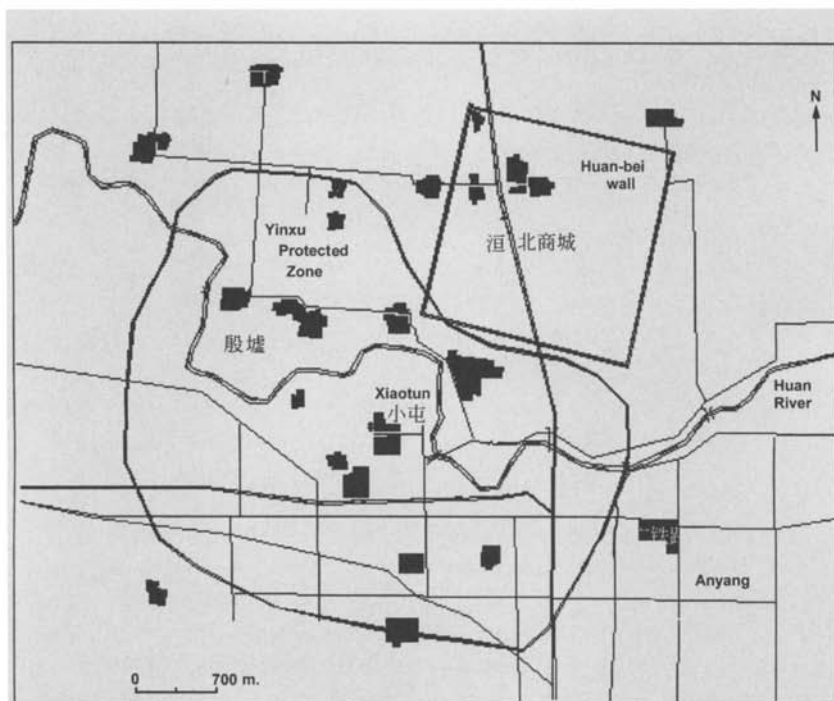


Figure 3.5. Huan-bei Shang wall site. *Gudai wenming yanjiu tongxun* no. 5 (2003), p. 54.

been exposed. A large gate house on the south has two entries to the yard. A wide gallery connects the gate house to east and west galleries. The main hall running across the north itself measures some 85 m wide and 14.4 m deep, subdivided into at least nine chambers. The interior of the compound has revealed a number of sacrificial pits, especially at or under ramps leading to doorways.

The historical identity of this site is debated. Two principal interpretations have emerged: (1) that it is the capital of the Shang king He Tan Jia, a settlement called Xiang, or, (2) that it is the original destination of Pan Geng, namely Yin. In archaeological terms, however, this site fits in a transitional period after the Yanshi and Zhengzhou occupations. The excavators of the Anyang Work Team now designate this transitional period as “Middle Shang.”

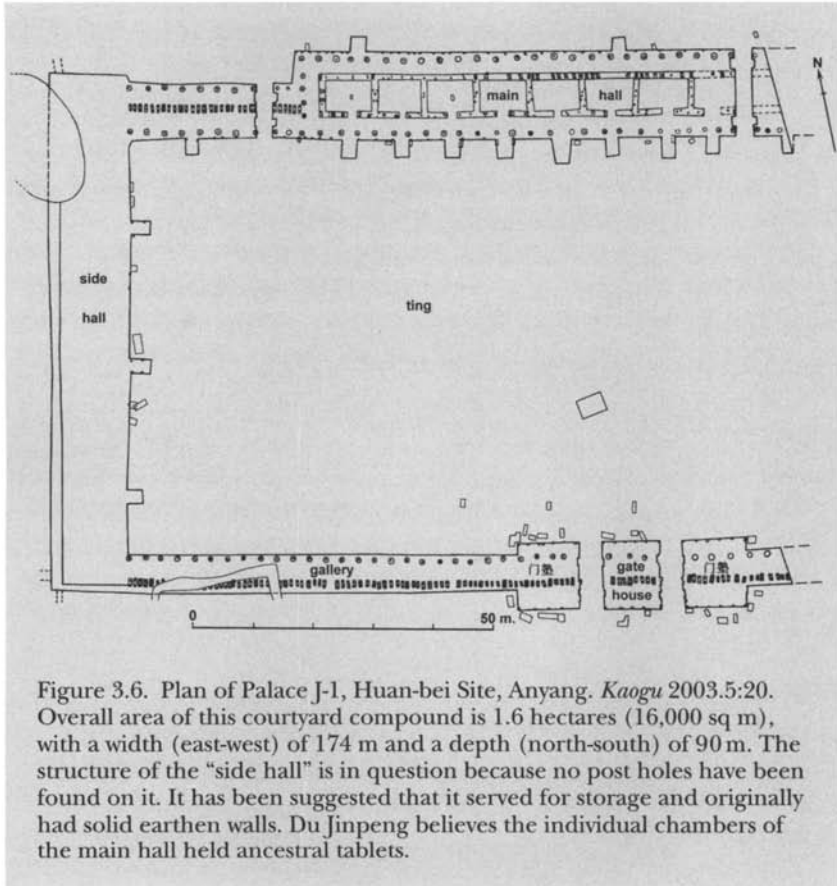


Figure 3.6. Plan of Palace J-1, Huan-bei Site, Anyang. *Kaogu* 2003.5:20. Overall area of this courtyard compound is 1.6 hectares (16,000 sq m), with a width (east-west) of 174 m and a depth (north-south) of 90 m. The structure of the “side hall” is in question because no post holes have been found on it. It has been suggested that it served for storage and originally had solid earthen walls. Du Jinpeng believes the individual chambers of the main hall held ancestral tablets.

Foundations: Xiaotun North

The first breakthrough in the prewar excavations was the recognition of pounded-earth foundations, as argued convincingly by Guo Baojun in 1933 (see Box 8). Many of the following seasons (nos. 4–9 and 13–15) were devoted to carefully uncovering these foundations, but excavation methods changed over time, and as a result the record is incomplete. Shi Zhangu published a total of fifty-three foundations in his monograph of 1959, some of them large platforms, others small strips or patches. The A Group (*Jiazuo*), in an area about 100 m NS by 90 m EW, was delimited on the north and east by the bend of the Huan River (see Figure 3.3). Most of these foundations (twelve of fifteen) were not excavated to sterile soil, and, indeed, a third (5 of 15) were only partially uncovered. One cannot know whether or not these platforms lay above

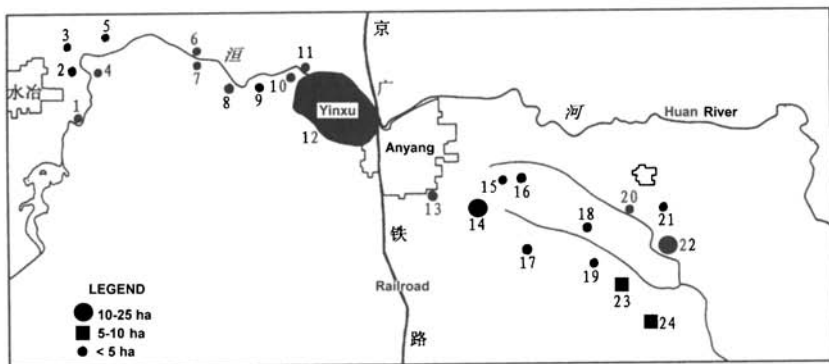


Figure 3.7. Sites along the Huan River, Late Shang period. *Kaogu* 1998.10:18. Yinxu is shaded, and straddles the Huan River northwest of modern Anyang. The two largest contemporary satellite communities, Xiao Balizhuang (no. 14) and Dahantun (no. 22), were down river with several others of second- and third-tier status.

other features (ditches, pits, burials), and for one-third their actual size and shape remain conjectural. Largely because of a lack of sacrificial pits ubiquitous elsewhere, Shi designated these foundations the “palaces” (*gong dian*) of the Shang kings. This could be true, but positive evidence, such as floor debris, hearths, or suggestive contents from nearby pits, is mostly lacking. Moreover, five of these foundations are long rectangles aligned north-south, hence facing east or west. This contrasts with what evidence we now have for major halls at sites like Erlitou, Zhengzhou, Panlongcheng, and Huan-bei. Such halls generally faced south within enclosed compounds. In 1987, the Anyang Work Team reexcavated foundation A-12, as a prelude to construction of the Yinxu Archaeological Park (Yinxu bowuyuan). Their efforts confirmed the size and shape of the platform as originally reported with a difference of only 50 cm in length. Reexcavation also revealed a perimeter circuit of eave support posts (like Panlongcheng, see Figure 2.10) that had not been previously recognized.

The middle foundations (B Group, *Yizu*) comprises twenty-one features in an area about 200 m NS × 100 m EW, ranging from small to very large. Foundation B-8, for example, is a long rectangle measuring at least 85 × 14.5 m. (Note the dotted lines for its east and west margins.) Here excavation methods were more thorough; most foundations were in fact cleared to sterile soil. This in turn revealed an extensive network of ditches, as well as nearby areas thick with sacrificial pits and a few burials. Li Ji believed that the eastern portion of this area had been destroyed by the Huan River cutting away its bank. Shi’s identification of

this zone as “ancestral temples” (*zong miao*) derives largely from sacrificial pits associated with foundations B-7 and B-12 (see Figure 4.6). These tracts included five chariot burials, many neat rows of animal and human sacrifices, as well as several graves and sacrificial pits furnished with bronze vessels that actually predated construction of the foundations. Again the plan of this group contrasts with earlier periods. Perhaps its confusing layout is evidence for several phases of building and rebuilding not clearly distinguished during the 1930s excavation.

C Group (*Bingzu*) occupies the southwest corner of the high ground, an area of 35 m NS $\times$ 50 m EW. It consists of seventeen small blocks. Half (nine) were completely excavated; half (eight) were only partially dug. Foundation C-1, at 17 $\times$ 20 m, is far larger than any other. Most instead are small squares or strips in two rows that Shi characterized as altars or perhaps dwellings. Consequently, this group has been interpreted as a sacrificial precinct.

From these data, several generations of scholars have characterized Xiaotun Locus North as the palaces and temples of the last Shang capital. Shi Zhangru, working with a modest assortment of datable oracle-bone inscriptions recovered near the foundations, concluded the area grew from the time of Wu Ding (A Group) until the end of the dynasty (C Group). It now seems more probable, however, that most of the foundations were actually constructed during the Wu Ding period, with some later growth or modification. These foundations rose on a site that had previously been occupied, in some areas by burials. The foundations represent a precinct devoted to sacrifice and divination. The Shang kings who presided over such activities (as recorded in oracle-bone inscriptions) are the most likely patrons and users of these structures, but whether they actually resided there is not attested. I prefer to designate this area as the Anyang “ceremonial core,” since those activities are the best documented. Remembering that in later times the location of ancestral temples was the key element in the definition of a *du*-capital, that rubric may also be appropriate for the site as a whole.

With the exception of foundation A-12, the Work Team has not excavated much in this area. Nonetheless, several of their efforts affect our present understanding. As early as 1958, probing about 200 m west of the modern village of Xiaotun led to the discovery of a large ditch. It was immediately recognized this ditch might encircle the palace-temple zone, but confirmation was delayed until the mid-1980s. In fact, the ditch runs from the Huan River channel, at a point 400 m west of the A Group foundations, southward for some 1,100 m. The ditch then makes a right-angle turn southwest of Huayuanzhuang, the village immediately south of Xiaotun, and runs another 650 m eastward to rejoin the river. This is no small feature. Its average depth is 5 m and its width varies from 10 m to 20 m. Initial work in the 1950s uncovered traces of what might have been

bridge footings and road surfaces parallel to the ditch. Within the ditch, Shang foundations occupied the highest ground in the northeast quadrant. The contemporary Xiaotun and Huayuanzhuang villages now spread across the south.

Other major discoveries within the ditch have been reported by the Work Team. The single most famous recent discovery in Shang archaeology, the tomb of Lady Hao (tomb 5), excavated in 1976, lies northwest of Xiaotun village and some 130 m southwest of the C Group (Box 14). This unlooted royal tomb was among a cluster of other finds: 40 house foundations, 160 pits, several other medium-sized tombs, and sacrificial pits and

Box 14 Tomb 5 and Lady Hao

Since their inception, archaeological investigations at Yinxu have been conceived and carried forward as adjuncts to history. The fundamental role of fieldwork has been to recover more primary sources—oracle-bone and bronze inscriptions—and to flesh out knowledge of the “great settlement,” its people, and their material culture. Historical sources, from the *Book of Documents* to *Shi ji*, provided the template for what should be found and how it should be interpreted. While some observers may scoff at the idea that history and archaeological data adhere to this relationship, some discoveries push us in that direction.

In 1975–76, an undisturbed medium-scale tomb was excavated in the area northwest of Xiaotun village, southwest of the Locus North foundations. Although the high water table compromised examination of base levels, the Work Team was nonetheless able to recover the durable grave goods of a person identified by over one hundred inscribed vessels and weapons as Fu Hao, “Lady Hao.” The richness of this find was staggering at the time, and remains so today. Its impact was magnified by the near total looting of all the royal tombs at Xibeigang. Fu Hao’s grave goods, however, were of a piece with the kinds of things left behind there, from her marble sculptures, to bone carving, weapons, and other paraphernalia. One can only speculate at how richly furnished those great tombs might have been.

The objects inscribed “Fu Hao” allowed scholars to identify this tomb as the final resting place of one of Wu Ding’s (officially, 1250–1192 B.C.E.) many consorts. Fu Hao appears frequently in oracle-bone inscriptions, by some counts about 180 times. In these texts,

she is raising men to go into battle, and involved in campaigns against hostile *fang-guo* of the north. She may have had her own settlement outside Yinxu, and certainly came to the court to take part in rites and divinations there. Moreover, Wu Ding evinces considerable interest in Fu Hao's prospects for childbirth (see Figure 4.4); she may in fact have been the mother of one of the next generation kings. The inscriptions also suggest that she died before Wu Ding. Although the king may have had as many as sixty *fu*-consorts, Lady Hao is one of only two whose graves have been identified at Yinxu. (M260 near Wuguancun, which held the *Si mu wu fangding*, was probably the tomb of a Mother Wu, also a consort of Wu Ding.) It is possible that other one- and two-ramp tombs at Xibeigang or elsewhere belonged to royal consorts.

While many scholars speculate that M1001 at the west end of Xibeigang was the burial place of Wu Ding, there is scant hope that attribution can be confirmed. Fu Hao and tomb 5, then, are the first instance in Shang archaeology in which the remains of a specific royal personage known from contemporary inscriptions have been identified. This identification, and the associated grave goods, give us a window into the royal family and its material culture during the early dynastic occupation of Yinxu. Tomb 5 is in every way a benchmark by which to assess the state of Anyang both before and after its time. Although Lady Hao is not attested in received sources like *Shi ji*, the accounts of her many roles derived from oracle-bone texts make her one of the most vivid personalities from this early period.

smaller burials. The area seems to have changed from use by the royal lineage as a burial and sacrificial zone in period II to a residential area later.

Near Huayuanzhuang village are several other major finds. The oracle-bones excavated in 1973 were discovered along the village road dividing Xiaotun and Huayuanzhuang (Locus South).⁴ About 5,300 fragments were recovered, most of them bones (not shells) dating to the middle reigns of the royal occupation. Some pits contained carefully stored shells and bones, while others were filled with refuse. This find was complemented in 1986–87 by a huge pit (39 × 14 m) containing waste from processing ox bones, estimated at 30,000 fragments. Some of the waste material found here could, of course, have been from preparing ox scapulas for divination, and with the nearby Locus South discoveries,

suggests a center in this area for divination activity. Another major find of inscriptions was reported in 1991 just east of Huayuanzhuang near the river, 400 m south of the Archaeological Park.⁵ This pit contained over 1,500 plastrons and fragments, which had to be removed as a mass for conservation at the Work Station, a method first employed at YH127 in season 13.

Yet another breakthrough came in 1989, when a set of pounded-earth foundations was located about 80 m southeast of foundations B-20 and B-21 (Figure 3.8).⁶ Three foundations formed a yard open on the east to the Huan River. The yard measured about 60 m EW $\times$ 35 m NS. The north foundation itself measured 60 $\times$ 14 m running east-west; the south foundation was longer but narrower (75 $\times$ 7 m). The west foundation was about 50 m north-south and 7 m wide. Each foundation was 2–3 m thick, and carried stone bases and traces of doorways. From associated pottery and an inscribed bronze *he* vessel (see Figure 4.18), the north foundation is dated early in Wu Ding's reign. This area (D Group, *Dingzu*) is now protected within the Yinxu Archaeological Park. Its discovery extends the palace-temple zone 130 m farther southeast, close to the present Huan River slope. In fact, the east end of this compound may have been destroyed by riverbank erosion.

Fields within the ditch northwest of Xiaotun village have never been systematically probed, but several finds nonetheless have been recorded over the years. For example, a number of surface houses once stood in the area of tomb 5; most postdate the tomb. Another cluster of surface houses came to light when the Locus South oracle-bone pits were cleared in 1973, along with nearby pits, a well, and a kiln.

Close to the north edge of the modern village were two semisubterranean houses excavated in 1975. Each had *hangtu* walls, one (F11) with traces of wall painting, and both were littered with tools and quantities of stone and jade debris suggestive of a workshop. Several hundred small whetstones were found, along with six hundred awl-shaped stones. These may have been used for abrading jades and hardstones. An assortment of small jade and stone carvings—a tiger, turtles, a duck—were also recovered (Figure 3.9). Small carvings of this kind were abundant among the grave goods recovered from the tomb of Lady Hao. One house is dated period IV from an inscribed bronze vessel lid.

The bone refuse pit southwest of Huayuanzhuang has already been mentioned as another workshop. Moreover, the prewar excavations recovered over 3,000 fragments of ceramic molds near foundation B-5, evidence for casting in that area. Workshops and their artisans seem, therefore, to have been located within the protective ditch adjacent to the foundations of the ceremonial center.



Figure 3.8. D Group foundations, Xiaotun Locus East, view north toward Yinxu Park. *Zhongda faxian* (1999), p. 153.

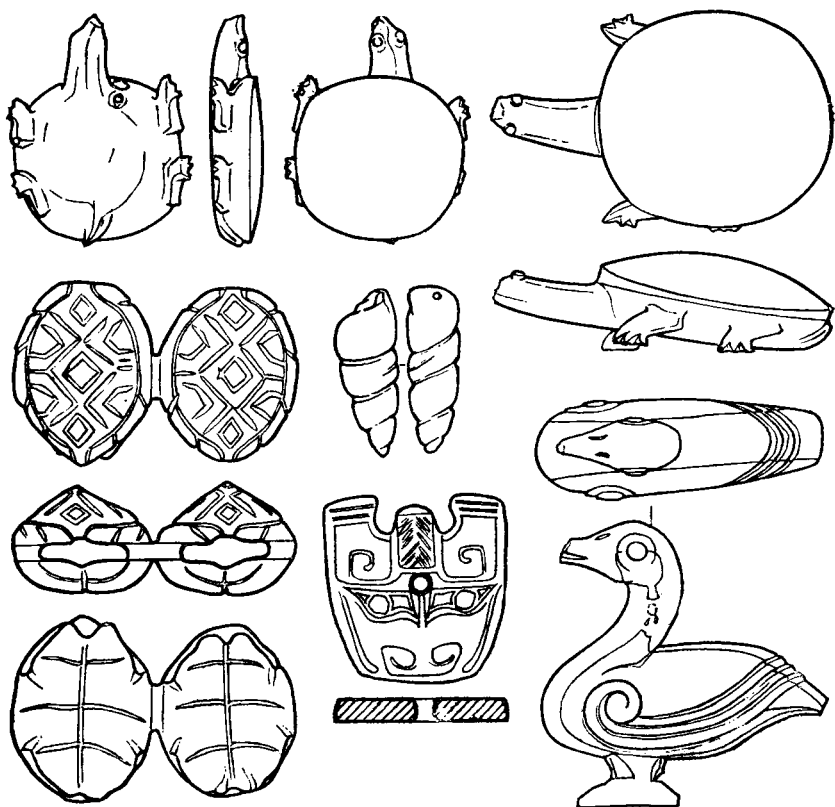
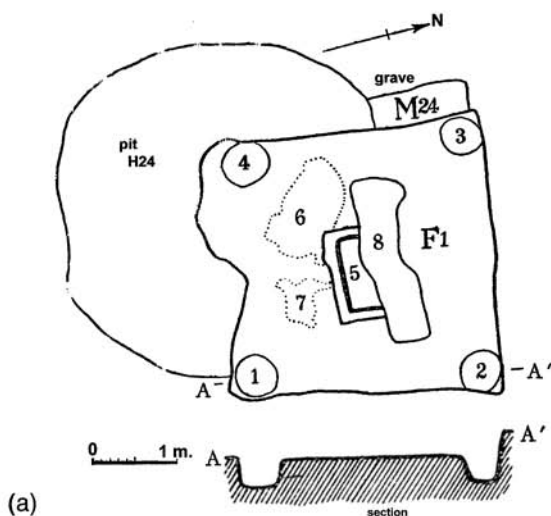


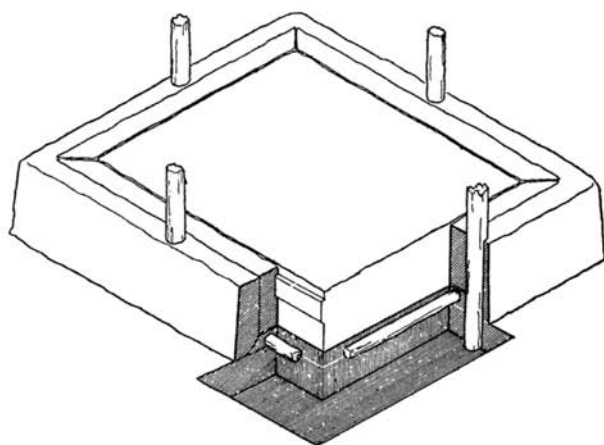
Figure 3.9. Carvings from foundations 10 and 11, Xiaotun Locus North.
Kaogu 1976.4, p. 269.

Workshops: Bronze and Bone

More extensive workshops have been unearthed at outlying sites. The largest bronze casting locus was just north of the “railroad forestry plot” (Tielu miaopu, hence “Miaopu North”), on the west side of Anyang City, at a distance one kilometer southeast of Xiaotun. This site is estimated at about a hectare (10,000 sq m) in area; over the years more than half of it has been probed and excavated. The eastern portion of Miaopu North seems to be occupied by an extensive cemetery. The western portion, on the other hand, is divided between a workshop on the east and a residential zone on the west. Most of the twenty houses in the former were surface structures, square or rectangular in shape, with solid walls, and one or two chambers. Their floors were hard and smooth, burned or



(a)



(b)

Figure 3.10. Casting shop with mold assembly, Miaopu North. *Yinxu fajue baogao* (1987), pp. 20, 49. (a) Top: plan and section of F1, a semi-subterranean house without walls measuring $3.3 \text{ m} \times 3.5 \text{ m}$. Four postholes (nos. 1–4) are shown at the corners of the hardpacked floor; a scatter of broken mold fragments and charcoal is indicated by the dotted lines (nos. 6, 7). The mold assembly is no. 5. A later horse pit (no. 8) cut into the assembly and surrounding floor. (b) Bottom: restored rendering of the *fangding* mold assembly. Length 117 cm, width (incomplete) 36 cm. A space of 2 cm was created between the outer clay molds and the inner core/base of pounded earth; this would have been the thickness of the vessel wall. The vessel was cast with its mouth upside down; sticks in the outer mold backing clay anchored the assembly.

composed of powdered caliche mixed with loess. Several houses held fragments of casting molds, unfired molds, tools for clay working, and evidence of bronze pours. One semisubterranean house contained a casting assembly in the floor such as might be required for a large *fangding* (Figure 3.10). Placing this mold assembly below grade may have facilitated pouring hot alloy from furnaces outside. The workshop area also had many hard surfaces without walls, where alloy evidently was heated in furnaces. Thus there may have been both open furnaces with hard packed surfaces surrounding them, and enclosed sheds where molds were prepared and casting assemblies positioned. The houses found at Miaopu North are reminiscent of those excavated at the Zijingshan Zhengzhou site. More numerous than surface structures were a profusion of pits and pit-dwellings with stairs that must have been used by artisans of the foundry. Some pits held sacrificial offerings.

Refuse recovered from pits and houses documents the process of bronze casting. Furnaces used to melt ingots brought to Anyang were made with thick walls of clay mixed with straw; they were positioned either in depressions in the ground or at ground level. These furnaces were as much as a meter in diameter; some had their pouring outlets intact. Some 5,000 fragments from their walls show contact with both charcoal fuel and bronze alloy. Fragments of crucibles used to hold the melt were also found. The most abundant refuse, however, was some 20,000 mold fragments, including outer molds with decoration, and cores and interleg cores. These fragments show that the following vessel types were cast: *fangding*, round *ding*, *gui*, *fangyi*, *you*, *zhi*, *jia*, *jiao*, *gu*, and *jue*, plus various lids (Figure 3.11). On the other hand, evidence for models is scarce. Parts of *zun*, *gu*, a *you* handle and ringfoot, a *ding* leg, a *guang* lid, and animal heads were identified. Relief on these model fragments had been stamped, while intaglio passages were carved. Tools, on the other hand, were in good supply. Bronze knives and awls, and bone styluses, were recovered along with grinding stones for cold-finishing. While the houses and workshops excavated were mostly from the late period, mold fragments were about evenly divided between earlier and later periods. The excavators believe this casting site began operations in periods I–II, and grew over time. From such evidence as the mold assembly for a large *fangding*, one might infer royal patronage or control of this foundry.

The several other Yinxu sites linked to bronze casting have produced less physical evidence. Molds were found in 1957 at Xuejiazhuang, a locus near Hougang not far from Miaopu North. Some writers speculate this was actually part of the former operation. The most important site after Miaopu North is 2.5 km west of Xiaotun at Xiaomintun, a tiny site compared to Miaopu North. Tools and weapons were most numerous among the mold fragments, including spades, adzes, *ge*, and spear points.

A bone-working site at Dasikongcun, across the river from Xiaotun and

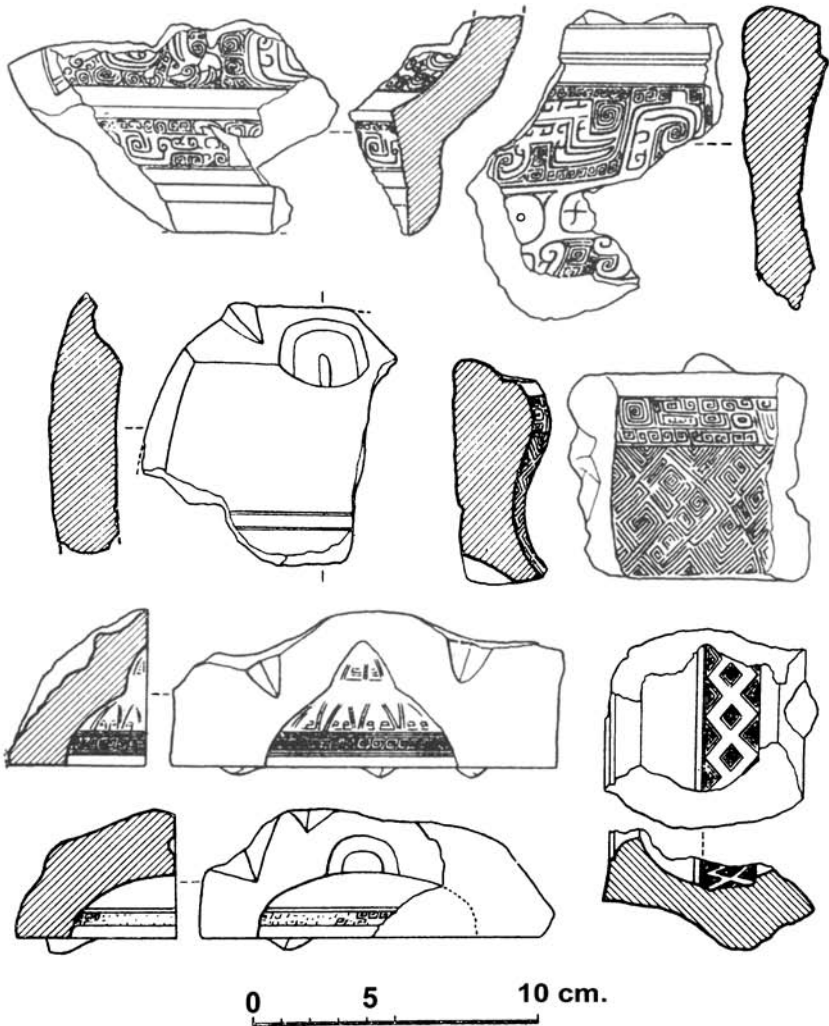


Figure 3.11. Fragments of decorated molds, Miaopu North. *Yinxu fajue baogao* (1987), p. 41.

Hougang, was explored in 1960. A single semisubterranean house, a dozen pits full of bone material (35,000 pieces), and assorted tools suggested its function. Animal bones included ox, pig, dog, sheep, and deer. Bronze saws and boring tools were used to shape long limb bones, ribs, and pelvises into rectangular and square blanks for such things as arrow points, awls, and hair pins. Another bone-working site was excavated at Beixinzhuang, about 3 km west of Xiaotun, with similar artifactual remains.

One major industry remains poorly documented. Kilns for firing ceramics and workshops for their production remain elusive at Anyang. A single damaged kiln was identified at Xiaotun Locus South and is dated to the early period. While its firing chamber and grate were intact, no pottery was found within. Sources for most gray pottery, stoneware, and hard white pottery have simply not been found; perhaps their production was more widely dispersed.

Given the uneven coverage of sites around the Xiaotun core, it is entirely possible that more workshops await future excavation. What has been catalogued to date seems inadequate to have sustained such a large ceremonial center. The location of the Miaopu North foundry was convenient to the Locus North core, as were some jade, bone, and possible oracle-bone workshops. The substantial size and construction of houses at these workshop sites links them to one another and might indicate royal or elite control as well as patronage.

Royal Tombs: Xibeigang

Oracle-bone inscriptions first attracted archaeologists to Anyang, and the *hangtu* foundations eventually led to recognition of Yinxu as a Shang settlement. But it was the excavation of the large tombs at Xibeigang in 1934–35 that first gained worldwide attention, because they so dramatically brought to life the reality of the Shang kings. Work across the Huan River, north of the villages of Houjiazhuang and Wuguancun (see Map 6), came in response to a number of clues. In 1933, Liang Siyong had excavated a two-ramp tomb on the west flank of the Hougang mound, the first evidence for large burials anywhere at Yinxu. Over the winter of 1933–34, villagers reported that fine bronze vessels had been looted from the Xibeigang area, and in spring 1934, a small find of oracle-bones brought archaeologists to an area south of Houjiazhuang village. In fall 1934, when Liang opened a series of trenches, he quickly revealed the outlines of four large tombs (M1001, M1002, M1003, M1004) with pounded earth fill, all at the west end of Xibeigang (Box 15). By spring 1935, these four tombs were cleared and another, M1217 begun; some 400 small sacrificial pits were also reported. In Liang's third season (fall 1935), four more tombs (M1500, M1550, and M1400 and, at the east end, M1443), an unfinished shaft (M1567), and almost 800 additional small pits were opened (see Figure 3.4). Both the size of the tombs and the extraordinary number of sacrificial pits convinced excavators and visitors alike that the Shang "royal cemetery" had been unearthed. At the same time, the extraordinary artifacts left behind impressed all observers with the richness of those buried here. When work resumed at Anyang in spring 1950, archaeologists returned to the east end, where another ramped tomb was known. Since then work has concentrated on probing

Box 15 H. G. Creel: Excavating at Anyang

Many difficulties . . . beset the excavators. The winters and summers are too cold and too hot for work, which must be done in the spring and autumn. But these are the windy seasons, when much of the time the yellow dust flies so thickly that one cannot see twenty feet ahead. As one stands on the brink of an excavation thirty feet deep the wind nearly lifts him from his feet and plunges him to the bottom. Under such conditions, wearing goggles, eight scholars directed the work of some three hundred workmen in 1935, and kept detailed archaeological records. This is anything but easy.

Because of the danger of bandits the archaeologists must pay a great deal of attention to guarding their finds and themselves. The Anyang region is especially bad in this respect. . . . Honan, and the Anyang district in particular, is filled with poverty-stricken peasants, some of whom are ready to turn to banditry in sheer desperation whenever the opportunity offers. They have crude home-made pistols which can be bought for three dollars local currency, equal to a little more than one U.S. dollar. A few of them have made fortunes from digging up the antiquities with which the region abounds. These rich unfortunates go in terror of their lives, for they are carried off for ransom at the least opportunity. For one such captive bandits recently asked a half million dollars, probably more than twice as much as all the farmers of the region together have received for all the antiquities they have sold.

This private digging interferes with the work of the excavators, by destroying material before they can reach it, far more than the bandits do. Soldiers and police are on hand to prevent it, and the National Research Institute keeps a man on the spot all the year round to maintain the watch. But the area to be supervised is a very large one, since the finest bronzes and other objects were buried in graves, and these graves seem to be scattered over the whole countryside. As a result of the official ban on digging, the grave-robbers have now developed a method of nocturnal operation. . . . To prevent them from prospecting in the daytime is almost impossible. They use an instrument something like a post-hole digger, and when they bring up a peculiar kind of "pounded-earth," they know that they have located an ancient grave. In preparation for digging they assemble fifty or sixty men, all with the greatest secrecy. After nightfall this band, all armed with guns, proceeds to the chosen spot. A few of them dig; the rest, taking advantage of any natural cover, or devising some slight protection, form an

armed ring about the scene of operations. Work proceeds feverishly and the entire tomb is gutted before morning. As compared with their abject poverty there is a fortune for each of these preasants at stake in their enterprise. If any attempt is made to interfere with them they will shoot to kill, resisting with the utmost stubbornness. In such circumstances, it is almost impossible to prevent digging. To do so one must know in advance where and when digging is planned. Given this information, one must have at his disposal a large body of soldiers or police ready and willing to walk into a nocturnal ambush of armed, desperate men (*The Birth of China: A Study of the Formative Period of Chinese Civilization* [New York: Reynal and Hitchcock, 1937], pp. 30–32).

nearby sacrificial tracts; only two additional large burials are reported. The Work Team has now covered most of this area, except some of the north. Both the limits and contents of this cemetery are now established; the area measures about 450 m EW × 250 m NS.

With the exception of a square, unfinished shaft (M1567) in the west end, all large tombs at Xibeigang have ramps (Table 3.2). Two early period burials with single ramps (M1, near the east ramp of M1217, and M260 at the east end), and three additional early graves with two ramps each (M1129, M1443, and the large Wuguancun tomb) are significantly smaller than the others. These one- and two-ramp graves have much in common with burials at Hougang, Dasikongcun, and the West Zones. Most scholars regard the number of ramps as a status marker. One- and two-ramp tombs both here and elsewhere at Anyang would seem to represent important personages of a status below the kings. Some were favored with burial near the kings, while others were interred amid their kin. By the same logic, the remaining large, four-ramp tombs of Xibeigang are attributed to the Shang kings themselves. The unfinished shaft is assumed by many writers to have been intended for the last Shang king, Di Xin, who presumably perished at the fall of the dynasty. Since nine kings are believed to have divined at Yinxu, eight tombs and one unfinished shaft nicely match the number of rulers.

These two clusters of quadrate tombs are separated by about 50 m. Only one (M1400, period II) occupies the east end, while seven (dated to periods II–IV) cluster at the west. Beyond assigning each tomb to a period, however, there is little hope of associating specific kings and burials. Many writers believe the earliest quadrate tomb (M1001) should be assigned to Wu Ding, but even this is not beyond dispute. The separation of the four-ramp tombs into two groups, the presence of smaller

TABLE 3.2. Xibeigang Tombs and Shang Reigns

<i>Tombs</i>	<i>Group</i>	<i>Ramps</i>	<i>Status</i>
<i>Yinxu Period II: Wu Ding-Zu Geng-Zu Jia</i>			
M1001	W	4-ramp	royal
M1550	W	4-ramp	royal
M1 (near M1217)	W	1-ramp	
M1400	E	4-ramp	royal
M1443	E	2-ramp	
M1129	E	2-ramp	
Large Wuguancun	E	2-ramp	
M260	E	1-ramp	consort [Simu wu fangding]
<i>Yinxu Period III: Lin Xin-Kang Ding-Wu Yi-Wen Ding</i>			
M1004	W	4-ramp	royal
M1002	W	4-ramp	royal
M1500	W	4-ramp	royal
M1217	W	4-ramp	royal
<i>Yinxu Period IV: Di Yi-Di Xin</i>			
M1003	W	4-ramp	royal
M1567	W	[shaft only]	

Source: Yang Xizhang, "Anyang Yinxu Xibeigang da mu de fenqi ji youguan wenti"
[Periodization and related problems of the large tombs at Xibeigang, Yinxu, Anyang],
Zhongyuan wenwu 1981.3.

ramped tombs, and a huge numbers of sacrificial pits at the east end all require further explanation. Whether this layout is related to lineage succession or to ritual change, or to some other factors, remain matters for investigation.

In plan, the large tombs have a number of common features (Figure 3.12). Each is aligned on north, those at the west end 10–25 degrees east of magnetic north, those on the east a few degrees west of magnetic north. Their four ramps thus are roughly aligned with the cardinal directions. Ramps may be either inclined planes or stepped. Some showed traces of ruts where coffin and furnishings may have been pushed to the bottom. In most cases, the south ramp descends to the base of the shaft, where it probably met an opening or proper door in the chamber wall. The other three ramps generally descend only part way, arriving as a rule at a ledge near the top of the chamber. This pounded earth ledge surrounded the wooden chamber and served as an area for installing additional burial goods and performing sacrifices. The shafts were dug to depths of 10–13m below modern ground level, but when they were excavated in 1934–35, many could not be cleared due to the high water

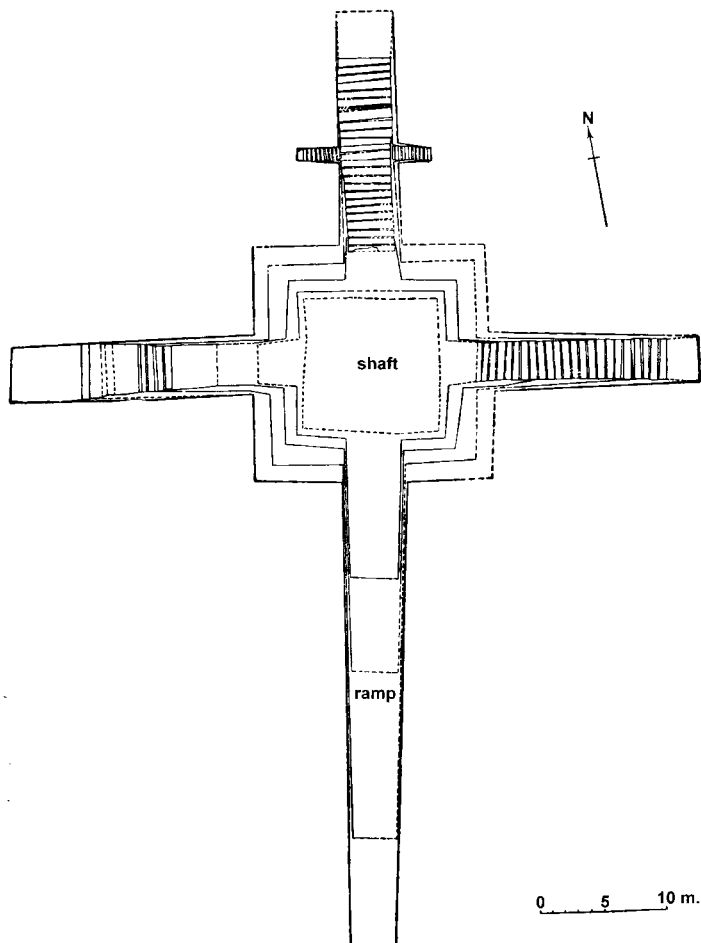


Figure 3.12. Plan of tomb 1550, Xibeigang. *Yinxu de faxian yu yanjiu* (1994), p. 107.

table. Thus detailed chamber dimensions are reported only for four tombs (M1001, M1550, M1004, M1003). All their chambers were about 3 m in height, with base dimensions from 9.7×6 m (M1001, largest) to 5.75×3.9 m (M1004, smallest). The chambers were made by spreading timbers as flooring, and then stacking seven to nine timbers horizontally for each wall. The wood was carved, inlaid, and lacquer-painted in some cases. At the base of the shafts under the flooring were square pits containing human and dog offerings. M1001 also had pits at its four corners. Since the walls of the shafts and ramps were inclined from base to

surface, the areas of the shafts at ground level range up to 200 sq m. The total volume of earth moving required is staggering.

A royal funeral must have been a great spectacle, although we do not know if there were in fact any onlookers. Much of the earth moving and construction could have been accomplished prior to a king's demise. However, that would also require protecting the open shaft from the elements in the interval between its completion and the funeral. In the alternative, a royal corpse would have been kept, perhaps on ice, during the period of construction. While chambers were assembled on site, the furnishings and coffin would have been prepared elsewhere and then carried to the tomb. Wheeled carts or chariots could have been used, but the ruts found in the south ramp of M1001 could also have been made by the runners of a sledge. After interring the coffin, ritual vessels, and other paraphernalia, the chamber was sealed (south wall or door and ceiling). Earth for the shaft and ramps was then refilled in stages. Ritual deposits and sacrifices were performed during this process, and the fill pounded hard. Other sacrifices were made around the margins of the shaft, and perhaps over time, in tracts nearby. It is not known if any structure was raised over or near the shafts. Traces of a foundation were recorded over tomb 5, but its identification as an offering hall is debated (cf. Fig. 4.5).

Looting in later ages effectively destroyed much of the chambers and presumably extracted most of their contents. Looters' pits dug into the vertical shafts were as large as 21×18 m (in M1004); all the four-ramp tombs were so afflicted. The large and deep block of pounded earth fill would have alerted looters searching for these shafts. The excavators speculated this looting may have taken place during the Song period (960–1279), when the area near modern Anyang was already known as a source of bronze ritual vessels. The emperor Huizong (r. 1101–1126) and scholar-antiquarians amassed great collections of ritual vessels at this time. On the other hand, an Eastern Han-period brick tomb found overlapping the fill of one looter's pit would suggest some large-scale plundering took place even earlier. Some lootings must have been more or less contemporaneous. Some contents from different tombs, such as broken marble sculpture (see Figure 3.18), were in fact mixed as the looters' tunnels were refilled. Only the corners and ledges outside the diggings were spared. Whether dug for a Song emperor or earlier, these large pits contrast with dozens of small tunnels dug most probably by local residents. M1003, for example, had sixty-six recent tunnels. Looting continued in the off-season as Academia Sinica worked the site, and later resumed during the Second World War.

In addition to damage caused and contents looted, these depredations make it impossible to estimate the total numbers of human victims

interred in these tombs. For example, M1001 had nine persons interred in the base of its shaft, eleven others on the ledge, as many as 136 victims in the ramps (63 skeletons, 73 skulls), and 80 victims around the margins at ground level. Other tombs, while more disturbed, had even larger numbers of skulls in the fill (M1550 with 243, M1500 with 114). Human victims were not, however, confined to royal burials. The 1,200+ sacrificial pits unearthed in the 1930s have since been augmented by probing during the 1970s and 1980s. By a conservative estimate, some 2,500 sacrificial pits occupy the east and south parts of Xibeigang, most arrayed in regular rows. Most pits contain multiple human or animal victims. Individual rows may represent single sacrificial events. Descendants of the dead kings may have returned many times to the royal tombs to make offerings to their departed ancestors. The size of these burials, the richness of their furnishings, and the terror induced by these sacrifices must have sent powerful messages throughout Anyang society.

Elite Cemeteries: West Zones

The most ubiquitous feature of archaeological sites at Anyang is cemetery tracts. Once the Work Team began to investigate zones surrounding Locus North in the late 1950s, they encountered extensive burials almost everywhere. Graves at Dasikongcun, across the river from Xiaotun (see Map 6), had been discovered during the prewar campaigns; recent work has uncovered thousands more. Cemeteries came to light south of Hougang and west of Anyang City at Xuejiazhuang, Miaopu North, and Guojiazhuang, to the west of Xiaotun in the area occupied now by the Anyang Steel and Iron factory (Meiyuanzhuang, Baijiafen, Xiaomintun), and at an even further remove south (Liujiazhuang and Qijiazhuang). The latter tracts lie outside the protected zone which the Anyang Work Team is charged to oversee, and have been investigated by the Anyang City Cultural Relics Work Team. About 3,000 burials have been reported from these many loci, but only a fraction excavated, and only some of that number published.

The so-called West Zones are at present the most thoroughly explored cemeteries. They offer evidence with which to evaluate the role of these areas and their populations in the broader context of Anyang as a ceremonial complex. After some initial efforts in 1958–61, concerted excavations began here in 1969 and have continued since. About 1,800 tombs were excavated east of a line from Xiaomintun to Baijiafen, but the Work Team estimates the total number at about 2,000. Ten different areas were probed, but the more significant finding was clusters (*zu*) of burials among them (Figure 3.13). Clusters are concentrations of graves separated from other burial plots; they exhibit fairly consistent patterns in

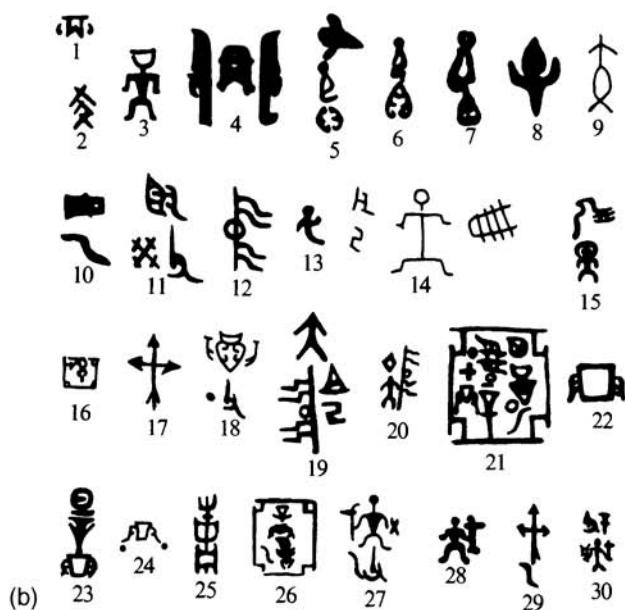
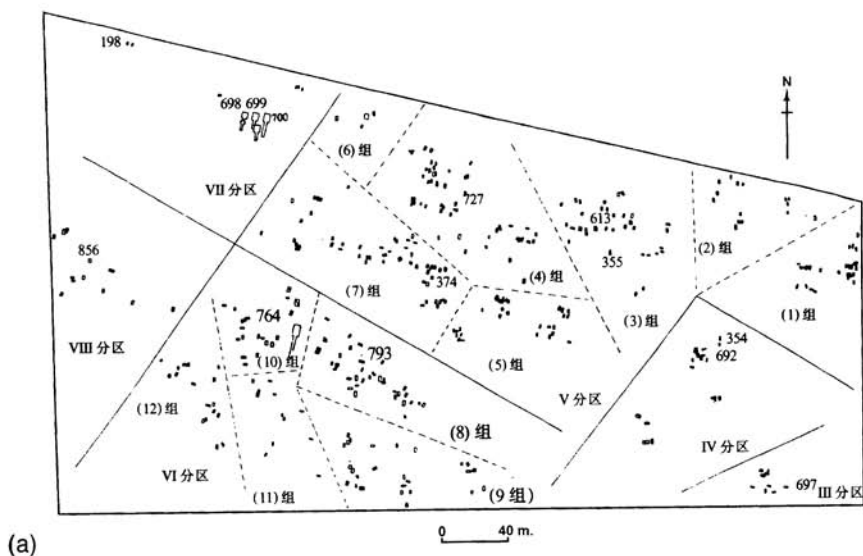


Figure 3.13. Grave clusters and inscriptions, West Zones. Han Jianye, *Kaogu* 1997.1:64, 68. (a) Top: Proposed division of Zone 3 with 369 graves; section V is shown with seven grave clusters. Some burials are numbered; note tombs with ramps in top left (698–700), section VII. (b) Bottom: Thirty inscriptions represented in Zones 3–8. Note no. 1 (“Bing,” also shown in Figure 5.5, vessels from Lingshi, Shanxi).

orientation and grave goods. Some clusters clearly grew over time. Some include large tombs, some with ramps, surrounded by more numerous, smaller graves. A modest number of the burials already published (sixty-five) contained bronze vessels, and a fraction of those bear inscriptions (thirty assemblages with thirty-five texts; see Table 4.2). When an inscription is found on multiple vessels in a grave or in several graves within a cluster, that group can be identified as a cemetery for that particular lineage (*jiazu*).⁷ These same phenomena have been found at other large cemetery tracts, such as Dasikongcun and Miaopu North. Altogether, only a small percentage of burials at Anyang contain bronze vessels (perhaps 4 percent), but most vessels (70 percent) bear inscriptions.

The correlation of clusters and inscribed vessels creates an additional level of analysis for understanding the Anyang sites. From both the size and contents of these thousands of tombs, and the more limited numbers of inscription texts (106), we conclude that many nonroyal lineages buried their dead at Anyang. The complex therefore served both the royal lineage, with its precinct at Locus North and royal tombs at Xibeigang, and a fairly large number of lineages of lesser status. I prefer to call these lineages the “petty elite.” They were not part of the royal family (Zi clan), but did enjoy a social status far above the rest of the population. These lineages must in fact have supplied leaders and men to carry out tasks commanded by the Shang kings. A sizeable percentage of those buried were interred with weapons, perhaps indicative of warrior status. Some small graves are found around chariot pits (seven in the West Zones) or tombs with a ramp (ten examples). This pattern suggests a lord or other person of a status intermediate between the kings and consorts of the royal family and most of the petty elite. Since inscriptions are also documented on vessels excavated from sites well removed from Anyang, we also conclude that some petty elite lineages established settlements dispersed over the landscape.

The tombs of the West Zones are small rectangular trenches, sometimes with ledges or niches, and sometimes traces of chambers, coffins, and pits dug in the base. These graves ape features of the large, four-ramp burials of Xibeigang, but at a much reduced scale. The most common grave goods are ceramics, with some animal offerings. A few personal items generally accompany the corpse, such as carved bone, shell, or stone. Within grave clusters, status differentiation is marked by the absence or presence of human victims, bronze weapons, or bronze ritual vessels. Since graves generally do not encroach on their neighbors, one must assume markers of some kind at ground level. Grave clusters seem to be haphazard in distribution, although those that grew over time generally expanded toward the west, away from Xiaotun. Most of the West Zones, and indeed other cemetery tracts, yielded little indication

of settlements either among them or nearby. The dead seem to have been segregated from the living.

Elite Crafts

Compared to Erlitou or Zhengzhou, the evidence for material culture at Anyang is both more varied and more complete. Pottery is abundant at all of these sites, of course, but at Anyang several different wares were used. Carving is especially notable; wood and lacquer, hard white pottery, bone, ivory, and marble were all exploited by skilled hands. The best evidence for carving comes from royal tombs (Xibeigang and tomb 5); stereotyped motifs and styles are found in all these media. Carvings were luxury crafts, but not entirely restricted to consumers of royal status. Working hardstones and jade, which seems to have been negligible at Erlitou and Zhengzhou, reappears with considerable vigor. In addition to an array of large blades and tokens of putative ritual use, an appealing menagerie of animals, birds, insects, fish, and fantastic creatures were created in small scale. Finally, casting bronze reached new levels of quantity and quality of design, and found wider application in weaponry and chariot fittings, as well as ritual vessels. Metal may have been restricted to the royal lineage, its subordinate lords, and their warriors. As with carvings and jades, bronze objects display motifs and styles that are stereotyped and consistent with other media. The ways in which bronze was given added value and visual interest derived from the same aesthetic choices seen in other materials. One can speak of a Late Shang or Anyang style as a common trait among these many objects, large and small, whether modeled, carved, or cast.

Ceramics: Gray and White Pottery

Abundant sherds and vessels of hard gray earthenware were key artifacts in the definition of the Yinxu culture. These objects were made in large quantities to serve a variety of uses in households and palaces, workshops and graves. When Erligang pottery from Zhengzhou came to light in the 1950s, it was convincingly linked to this pottery from Yinxu in a seriation that described a nearly continuous development. Similarly, as the Erlitou type site was exploited in the early 1960s, its pottery was seen to preface the Erligang-Yinxu sequence. Gray wares of these three type sites have much in common, even though the selection of types and their rendering evolved continually during the second millennium B.C.E.

Much of what was said about Erlitou pottery above can be applied to both Erligang and Yinxu earthenwares. Local clays were used for potting. Some clay was refined to small particles (for example, for serving

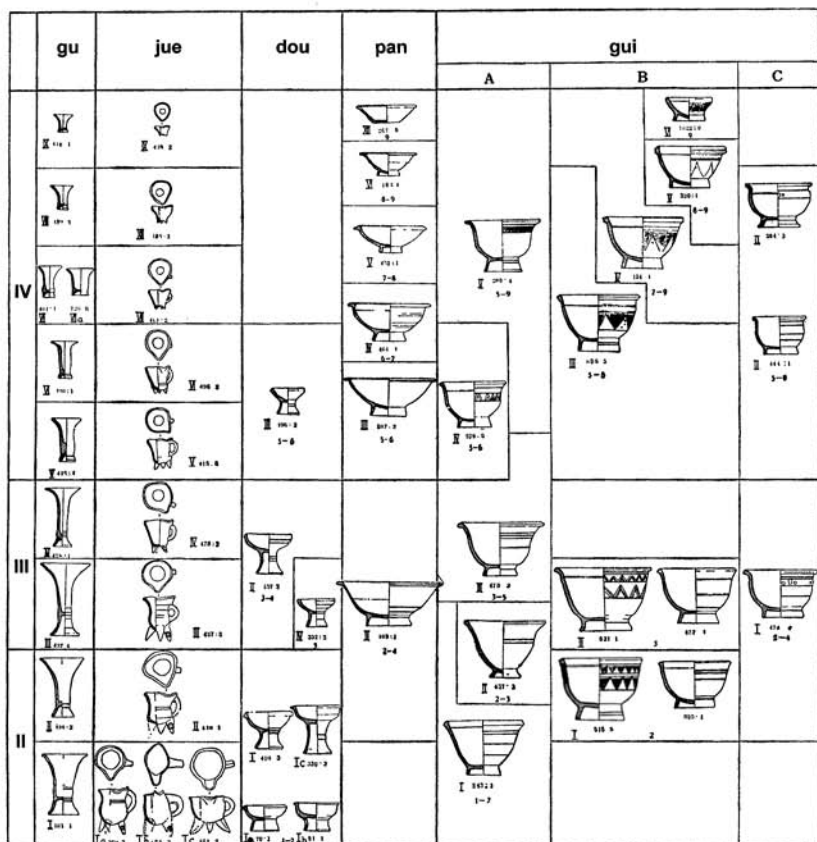


Figure 3.14. Ceramic seriation from Yinxu burials, West Zones, periods II-IV. *Kaogu xuebao*, 1979.1:110.

vessels), while other wares used for cooking or storage required clay mixed with sand temper to resist heat and add strength. Most gray ware vessels were formed by a combination of techniques: coiling (for bodies), molds or hand modeling (for legs, lugs, handles), and wheel turning (for ring feet and rims). Cordmarking is ubiquitous, but so too are burnished smooth surfaces, some with incised or impressed surface treatment. Fired in a reducing kiln, Yinxu gray wares were relatively hard, yet still porous.

Pottery vessels (types) can be remarkably long-lived. Most considered here can be found at least from Erlitou through Yinxu periods, and some continued even longer. Many shapes originated among the pottery

of the Henan Longshan Culture. Whether we sort types by attributes (base, body, and other features) or by functions (cooking, service, or storage), the universe of vessels was finite and predictable (Figure 3.14). Cooking accounted for the ever-present *li*-tripods, as well as *yan* (*xian*) tripod-steamers and *zeng* steamer-bowls. Thick potting and gritty, tempered clay were requisite for these purposes; cord marks predominate. Serving types are shallow dishes on pedestal stands (*dou*), and small bowls (*gui*, *yu*) and basins (*pan*) on ring feet. Fine, levigated clay was shaped using molds for their ring feet and a wheel for finishing rims. Surfaces were smoothed and then given a few raised or incised lines. Storage vessels are usually larger than serving types, with flat or rounded bases for stability, and wide or narrow mouths depending on contents. A variety of jars and crocks (*guan*, *weng*, *zun*, *lei*, *pou*, *hu*) are distinguished by differences in shoulders, necks, and mouths, and sometimes lids. Cordmarking is common, but other surface treatments were also applied.

Three luxury wares have been found at Anyang sites, mostly in substantial houses (workshops?) and richer tombs, especially the Xibeigang tombs and sacrificial pits. A hard, white pottery is the best known. The clay seems to be available locally, although no workshop for making white ware has yet been located. Shapes are consistent with gray ware. Surface decoration, far more elaborate than gray pottery, can be compared to decoration in other media including bronze vessels. The richest find of this white pottery is the small, single-ramp tomb excavated in 1978 adjacent to M1217 at Xibeigang. The large tomb excavated in 1950 at Wuguancun, as well as nearby M260, both at the east end of the royal cemetery, also yielded quantities. The selection of types is restricted (Figure 3.15): pedestal dishes (*dou*), bowls, some with lids (*gui*, *yu*), lidded jars (*pou*), and larger storage jars (*lei*, *zun*). Most whole vessels have decoration carved in several registers that cover most surfaces, a characteristic feature of bronze vessels. Squared spirals, often with zigzag bands, are common. This would seem to be primarily a service ware, and may have complemented offerings served in bronze or lacquered wooden vessels on the altars at Yinxu. It is rarely found after Yinxu periods I–II.

Two other luxury wares documented at Anyang sites most probably were not produced there.⁸ Both hard pottery (*ying tao*) and glazed pottery (*xiu tao*) were recovered in the prewar excavations and on a few occasions since. These are better described as stonewares, thinly potted, high-fired, and sometimes glazed. Both wares were made in shapes not common or typical of the gray pottery described above. Their clay and glaze are actually very close to wares known from the Gan Yangzi and Lower Yangzi macroregions, including the Wucheng Culture of Jiangxi. They are considered below (Chapter 5) as objects traded from the Yangzi regions to North China.

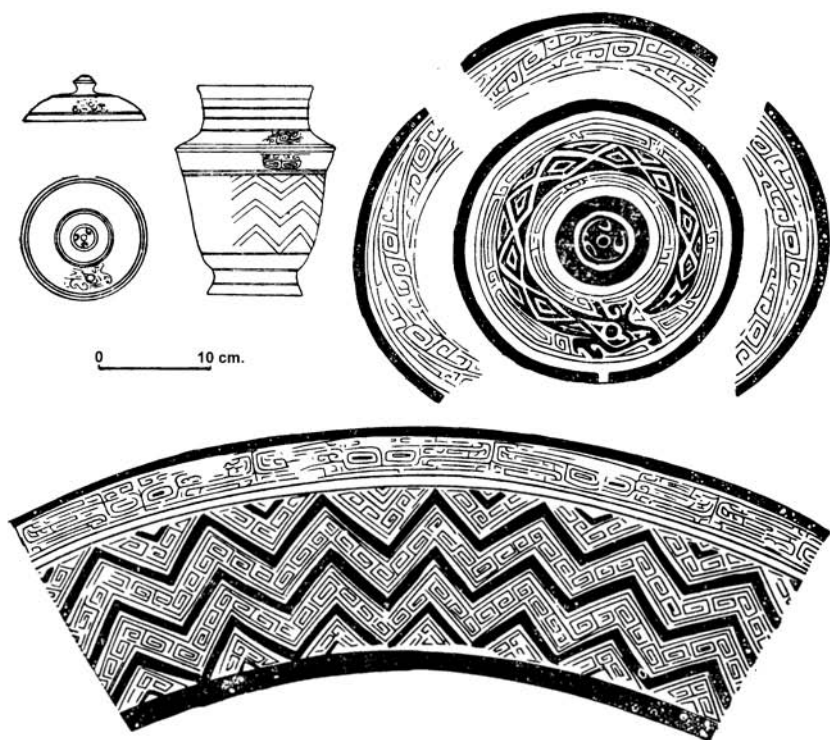


Figure 3.15. Hard white pottery vessel. *Yinxu de faxian yu yanjiu* (1994), p. 234.

Carving: Bone, Ivory, and Marble

Until the Anyang excavations shifted to the royal tombs in 1934, the artifactual record was dominated by ceramics and occasional discoveries of oracle-bones. With work at Xibeigang, however, artifacts of a very different kind came to light. Even after large-scale looting, pockets of undisturbed earth were found in the tombs. Within were traces of perishable objects and carvings of more durable materials. The disturbed fill of the looter's tunnels also contained fragmentary objects, sometimes a single item broken into pieces that were recovered from different tombs. Traces of the wooden timbers used for flooring and walling the burial chambers were mentioned above. Their impressions were preserved, if looters did not intervene, because of the earthen fill pounded hard against them. On ledges and in ramps, archaeologists found imprints of still other wooden objects: a drum and its stand in M1217, a scatter of shields in M1004, and a wooden litter from M1001. Like the chamber

walls, these objects combined wood carving, inlay, and lacquer painting. The many pieces of shell and boar ivory were most probably inlay, and this could also be true of small stone plaques and bronze bosses.

Two bone workshops were noted above: at Dasikongcun, across the Huan River from Locus North, and to the west near Beixinzhuang. In addition a large pit with bone waste was uncovered near Huayuanzhuang, inside the ditch enclosing Locus North. Bone came from many animals, but especially oxen. These animals played a major role in Shang life and cult. Slaughtered for offerings, one of the most frequent topics found in oracle-bone inscriptions, they also provided shoulder blades (scapulas) for divination. Skeletal remains are abundant among the sacrificial pits at Locus North (B Group) and tracts at Xibeigang. David N. Keightley has estimated that six oxen were slaughtered for their scapulas each ten-day week (along with thirteen turtles).⁹ An offering ritual might take as many as ten or fifty animals at a time. Such useful parts as the long bones, ribs, and pelvis were left after the scapulas were removed. Bone tools (knives, scrapers, styluses, awls) are common at bronze casting sites, and would have been used to prepare clay models, molds, and cores, as well as when producing pottery generally. Bone hairpins were a major product of the Dasikongcun workshop, and hundreds have been found in Anyang burials. Tomb 18 at Locus North had twenty-five bone hair pins and two jade ones near the skull of the deceased. The royal tombs yielded elaborately carved bone used as serving spoons and spatulas, as well as vessels such as drinking goblets (*gu*). M1001 had 470 spatulas and 18 goblets; the interiors of these goblets were lacquered red.

Both elephant and boar ivory were also found in the royal tombs. The tomb of Lady Hao had three large drinking goblets among its furnishings. These objects are among the most elegant and finely crafted ever found at Anyang (Figure 3.16). Two of the goblets have handles mounted to one side of a flaring tube similar in shape to a bronze *gu*. The silhouette is less dramatic than contemporaneous bronze *gu*, which can have a lip twice the diameter of the foot. The handles feature a deeply cut beak above the grip, which in turn rises from a small dragon. The surfaces are densely carved with alternating plain bands and squared spirals. In addition, major motifs such as eyes, brows, ears, and lines defining registers are inlaid with turquoise. A third goblet from tomb 5 has a different shape, with a pouring spout opposite its handle, but no inlay. In each goblet the stacking of repeated yet varied motifs is similar to conventional bronze decoration, if more dense. Elephants are in fact a part of the archaeological record; at Anyang pits with elephant skeletons have been excavated three times. The animals could have been tribute from statelets in the Yangzi regions. Ivory tusks were a significant component of the contents of the two pits at Sanxingdui, in Sichuan, roughly contemporary with Yinxu period II (see Chapter 5).

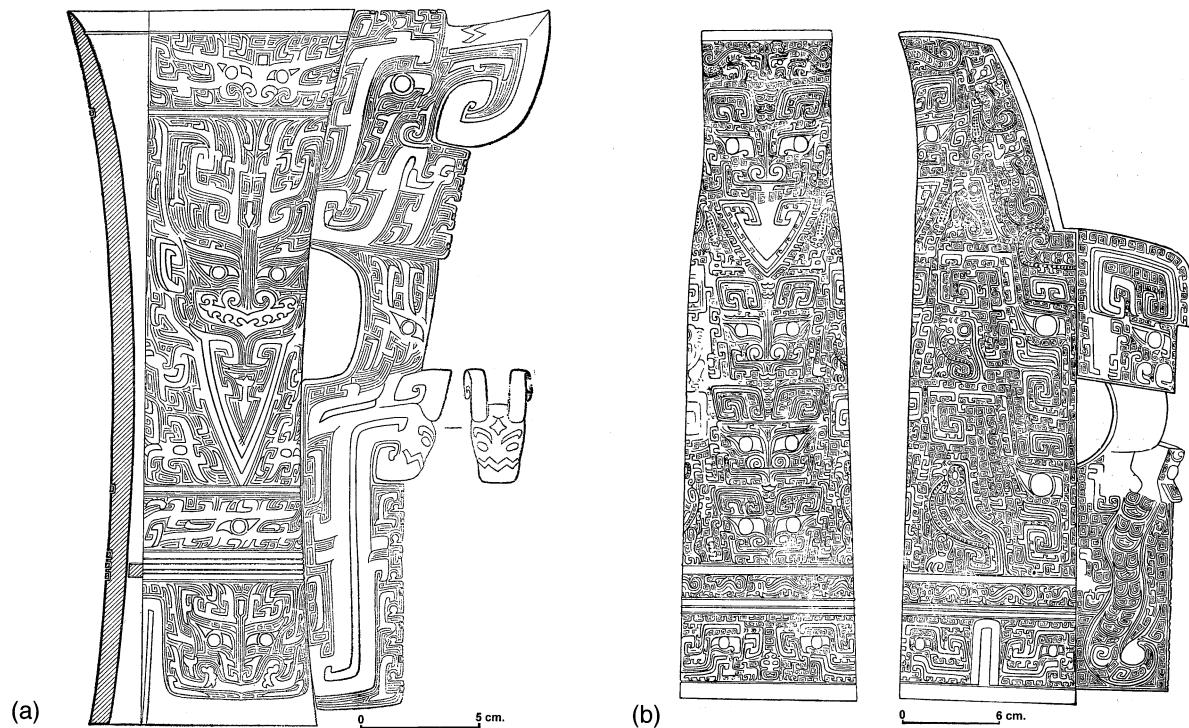


Figure 3.16. Ivory goblets, tomb 5, Anyang: (a) goblet with turquoise inlay, height 30.3 cm, *Yinxu Fu Hao mu* (1980), p. 216. (b) goblet with pouring trough, height 42 cm, *Yinxu de faxian yu yanjiu* (1994), p. 397.

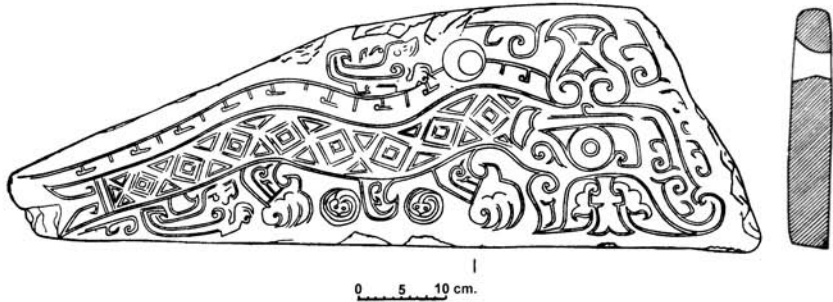


Figure 3.17. Stone chime, Xiaotun Locus North, limestone, length 88 cm. *Yinxu de faxian yu yanjiu* (1994), p. 362.

The nearby foothills of the Taihang Mountains provided several kinds of stone for workshops at Yinxu. Marble, limestone, sandstone, slate, and quartz have been identified among the thousands of stone artifacts. The largest category in sheer quantity must be tools such as axe heads, spades, knives, and sickles. A large number of stone knives, about 3600, found in pits among the Locus North foundations, has prompted speculation that the Shang kings controlled these tools. In this scenario, the king managed agricultural production while distributing and collecting these knives. An assortment of marble vessels is also known, including many of the serving types found in hard white pottery (*dou*, *gui*, *yu*), along with small altar stands (*zu*). Musical chimes (*qing*) of limestone, both single items and sets of three or five, are known from several royal tombs and the large tomb at Wuguan-cun (Figure 3.17). The Wuguan-cun chime and another found near Locus North feature relief decoration of a profile tiger and dragon, respectively. Both a marble *gui* vessel and one chime have inscriptions that indicate they were “presented” (*ru*) by a certain person. Similar phrases are a feature of inscriptions on the bones and shells used in divination. These records suggest the royal family received a variety of goods from subordinates or allies.

Marble sculpture seems to have been restricted to the royal tombs; all excavated examples come either from Xibeigang or tomb 5. Since looting was pervasive at the former, the context of these sculptures is far from clear. Pairs of heavy square “sockets” were found in the fill of M1001, M1003, and M1500. Two pairs were found at the juncture of south ramp and burial chamber. They could have served, therefore, as pivots for door panels or as weighted stands for something else. The finest marble sculptures, however, were recovered from the dis-

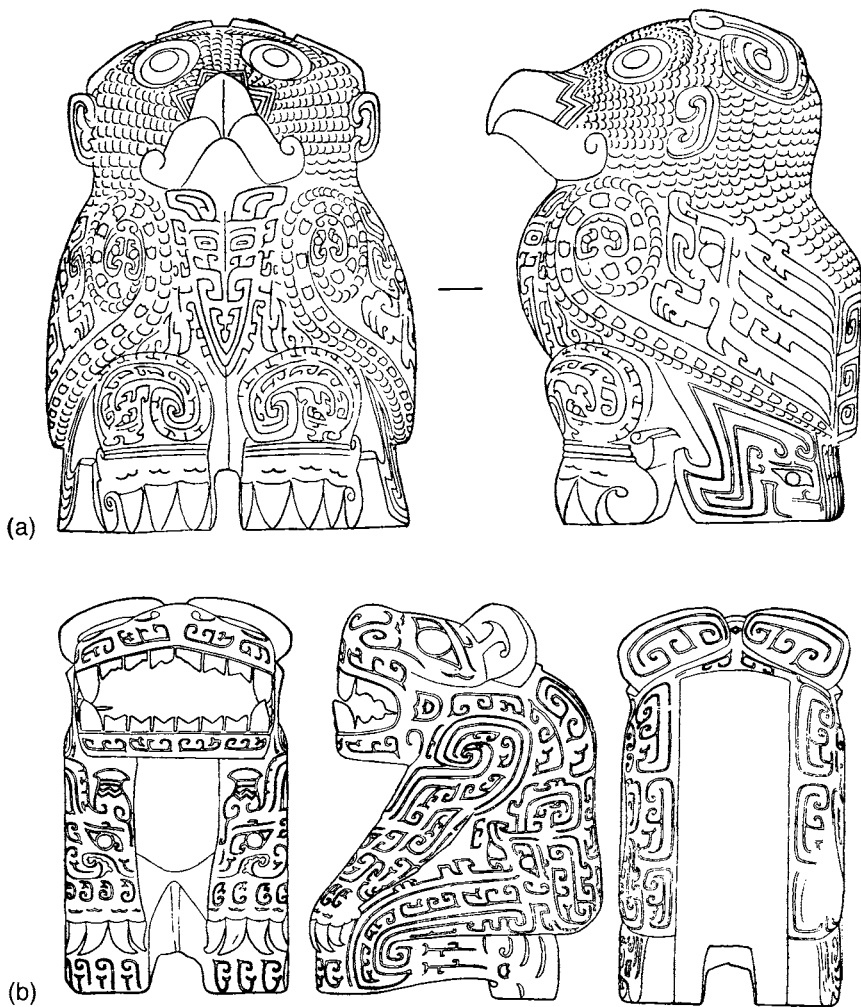


Figure 3.18. Marble animals, tomb 1001, Xibeigang, Anyang: (a) owl, height 33.6 cm; (b) tiger, height 37.1 cm. *Yinxu de faxian yu yanjiu* (1994), pp. 372, 377.

turbed fill of M1001: an owl resting on its two drumstick legs and tail feathers, and a tiger kneeling like a human, with front paws resting on its knees (Figure 3.18). The back of each animal has a deep, vertical slot that may have anchored a support. While the tiger retains the planes of its four-sided marble block, the owl is more fully rounded. Each has crude grooves in the base separating claws and tail feathers or

knees and hind paws, leaving ample flat areas for stability. Relief on the surfaces is minimal: eyes, ears, and horns on the owl, ears and forelimbs on the tiger. Surface detail made by incised linear patterns is extensive, like a full-body tattoo. Coiled snakes and dragons emerge amid this profuse ornament. Natural details appropriate to these creatures are nonetheless prominent. The beak of the owl and the barred teeth of the tiger make a forceful impression. Both kinds of animals are common among other carvings, including many small jades from tomb 5, and they appear also in bronze. Each could have evoked specific associations as cunning predator of the night or the most ferocious of the great cats. They remain the largest sculptures among Anyang finds.

Hardstones and Jade

Jades were last discussed in conjunction with Erlitou. Their paucity at Zhengzhou and related northern sites could be an index of inactivity in this medium, perhaps a lack of sources. However, it is more likely the by-product of the absence of rich burials among northern finds of the Erligang Culture. The largest jade *ge* of the period (at 94 cm, identified as serpentine) came from tomb 3 at Lijiazui, Panlongcheng. Four other *ge* were found in tomb 2 at the same locus, one of the richest burials of the period for its total quantity of bronze. In Jiangxi, the Dayangzhou tomb held a significant number of jades: four *ge*, ten disks (*bi*, *huan*, *yuan*), nineteen *jue* earrings, and miscellaneous ornaments. This burial also yielded two unusual jade carvings: a mask from the late Neolithic Shijiahe Culture of Hubei, and a strange figure with a chain link for which no parallel exists. Nothing comparable to these graves in Hubei and Jiangxi has yet been reported from any Yanshi or Zhengzhou excavation, or elsewhere in the north. Thus the supposed decline in jade working may be more apparent than real.

Finds of soft jade (nephrite) at Yinxu are limited to rich burials like tomb 5, with the exception of the two houses just north of Xiaotun mentioned above. Setting that find aside, however, we have no other data for a jade industry at Yinxu. Scientific analysis of jades from tomb 5 confirmed the long-held belief that most were Xinjiang nephrite, although tremolite, Nanyang jade, and serpentine are also reported. While some of Lady Hao's jades were relics from earlier, Neolithic cultures, the majority are consistent in style with each other and with carvings in other media. Almost every size, shape, and degree of technical difficulty is represented among jades found at Yinxu.

Flat slabs of nephrite in the shape of tools, weapons, "scepters," and disks are normally classified (according to the practical purpose of their presumed prototype) as tools, weapons, or, by default, as "ritual"

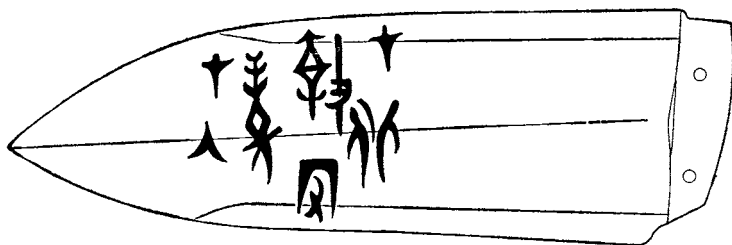


Figure 3.19. Inscription on jade *ge*, tomb 18, Xiaotun North. *Kaogu xuebao* 1981.4:504.

jades. As Xia Nai and others point out, the standard nomenclature for the latter category was created during the Warring States and Han eras. It seems unlikely that a so-called axe, adze, awl, spade, or mallet of nephrite was ever actually employed for mundane purposes. Traces of wear generally cannot be found on these objects. Thus the usual categories employed in excavation inventories collapse. Most of these forms, whatever their prototypes, would seem to be tokens of symbolic value rather than practical utility.

Blade shapes found near a corpse in an undisturbed burial might have been tokens of social identity or rank. Perhaps delicate blades were carried on ceremonial occasions. The most common type is the *ge* dagger-axe, of which nearly 200 jade examples have been recovered. Lady Hao has 39 jade *ge* in her tomb with 91 bronze *ge*. The *ge* type is documented continuously from Erlitou to Yinxu, but did not have a Neolithic prototype. Bronze *ge* were ubiquitous, especially from the Erligang period, and so may be considered a characteristic artifact of Shang warrior society. Troops of Shang warriors must have been equipped with these weapons. Honor guards for persons of status may also have carried *ge*, for example, the guardians put to death and buried in pits at the base of the royal tombs. Some *ge* at Yinxu combine materials, additional evidence for ceremonial use. For example, tomb 5 had two jade blades joined to bronze butts inlaid with turquoise. One of these, measuring 57 cm in total length, was the largest *ge* in her tomb. It was recovered from a deposit placed in the refilled earth above her burial chamber. Another jade *ge* in tomb 5 had an incised inscription: “five *ge* brought in by Lu-fang.” Similarly, a *ge* in tomb 18 had a text written in red pigment on its blade with several place names known from oracle-bone inscriptions (Figure 3.19). The excavators hypothesize it was obtained in battle.¹⁰

The several varieties of disks (*bi*, *huan*, *yuan*), however, confound easy explanation. Perhaps they served several uses during their life cycle. Examples with shadowy imprints of cloth once attached to them suggest

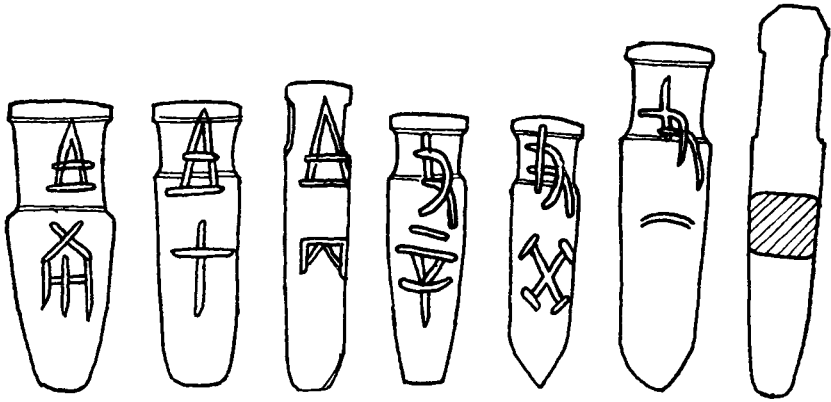


Figure 3.20. *Bing* with ancestor dedications, Hougang tomb 3. Liu Zhao, *Kaogu* 1995.7:624.

disks sometimes were appended to clothing or furnishings by sashes. A rare example of disks in context was a pair found near foundation B-2, Locus North. A green disk on the east was paired with a white disk on the west; their perforations were filled with bits of turquoise. This would seem to be a ritual deposit, and calls to mind Warring States and Han period color symbolism associated with the “Five Agents” (east/green and white/west).

Actual ritual use of most Yinxu jade forms, however, remains unproven. A small looted tomb at Hougang offers intriguing evidence for one of the most enigmatic forms, the “handle-shaped object” (*bing xing qi*).¹¹ This tomb held six stone *bing* with brush-written texts naming ancestors (Figure 3.20). The use of an ancestor title (grandfather or father, *zu* or *fu*) with a cyclical stem (*jia*, *yi*, *bing*, . . .) is commonplace in oracle-bone inscriptions concerning sacrifices, as well as in dedications on bronze vessels. Since these handles seem to be shaped for attachment to something, it has been suggested they were mounted on stands for use on altars. *Bing* are the most common jade type at Erlitou, and are well known throughout the distribution of the Erligang Culture as well. At Yinxu they are fairly common, both in large and smaller burials (tomb 5 had thirty-three, none inscribed). *Bing* are sometimes found near the waist of the skeleton, so it has also been speculated that they were worn with a belt or sash.

Nephrite was also worked into serving vessels. Two jade *gui* bowls and a *pan* basin in tomb 5 share the proportions and decoration of these types in marble or hard white pottery. They supply still more examples of the use of diverse materials on altars or perhaps in banquets during

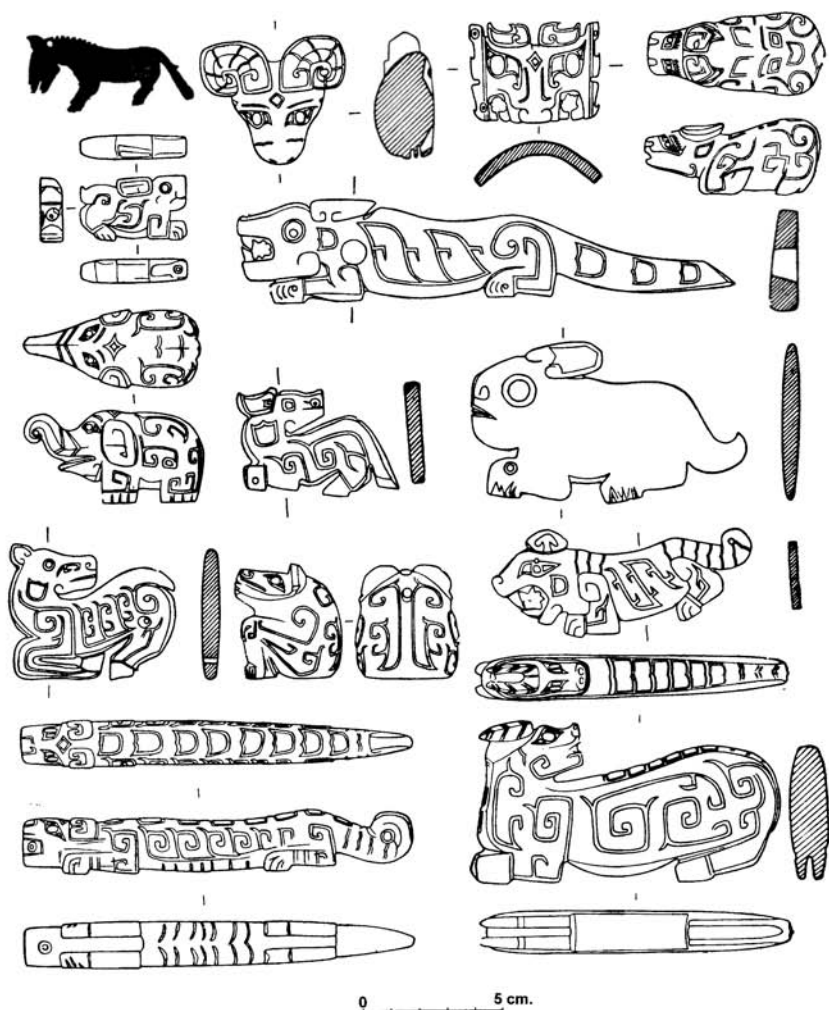


Figure 3.21. Jade menagerie, tomb 5, Anyang. *Yinxu de faxian yu yanjiu* (1994), p. 343.

periods I-II. Grinding out the cores of the *gui* bowls would either have consumed much valuable nephrite or taxed the skills of the lapidary required to remove it whole. These vessels are the largest pieces of jade known from Yinxu.

Carvings of animals and human figures in the round were less common than flat plaques of the same subjects in tomb 5 (Figure 3.21). The

excavators counted some 186 examples: 13 human figures, 18 fantastic animals, and 155 real animals. Unlike plaques sawn from a block and given interest principally by their silhouettes, carvings in the round approximate features of the animal or figure depicted. For the most part they stand literally on their own feet, and seem to have no obvious purpose other than the pleasures of handling and viewing. Both animal plaques and carvings in the round have surfaces enlivened with hooks, zigzags, spirals, and cells. Most of these motifs were realized by incising pairs of lines that create the look of relief without removing surrounding surface. Animals in jade match those species found in marble, but also include insects, reptiles and amphibians, birds, domestic and wild animals, as well as dragons.

Human figures from tomb 5 significantly augment the data for Shang costume and hair styles (Figure 3.22).¹² (At least two figures attired in Shang dress are attested in marble: one from M1004 gives a detailed rendering of clothing, but is missing its head. Another recovered west of Xiaotun was intact, but finished with less detail.) Figures in tomb 5 were made both from stone and nephrite; all are small enough to be handled in the palm. Kneeling postures predominate. One appears nude, another has full-body tattoos, while yet another wears a costume with a collar and waist band like the marble figure from M1004. Hair is cut in bowl fashion, or hidden by a roll worn around the head, or gathered above the forehead to look something like a sushi chef. The latter example has a forked “tail” extending from one haunch.

Lady Hao received various objects from others, as recorded by the inscriptions cited above. A long *ge* blade with a crimped profile may well be from Sanxingdui, Sichuan, although it is not inscribed. The Sanxingdui pits contained a notable quantity of blades with just this shape. On the other hand, the *zhang*scepters (forked blades) from Sanxingdui are completely absent from Yinxu. Lady Hao also collected large quantities of small carvings, including some that predate the Late Shang. An arch-shaped double-tailed bird, dubbed a phoenix, has raised line relief rather than the incised double-line technique (Figure 3.23). Both this technique and the design of the bird find parallels in plaques excavated from a site of the Shijiahe Culture.¹³ (The lord of the tomb at Dayangzhou also had a jade from the Shijiahe Culture.) Several *cong* (squared cylinders) from tomb 5, on the other hand, have only a tenuous relationship to *cong* known from the Liangzhu Culture. Curled dragons from tomb 5 are flat, although a few recall jade dragons of the Hongshan Culture. Details of their horns and face, however, are not especially close. These few examples illustrate the mobility of jades over time and space, and the impact of contemporary and earlier cultures on artisans at Yinxu.¹⁴

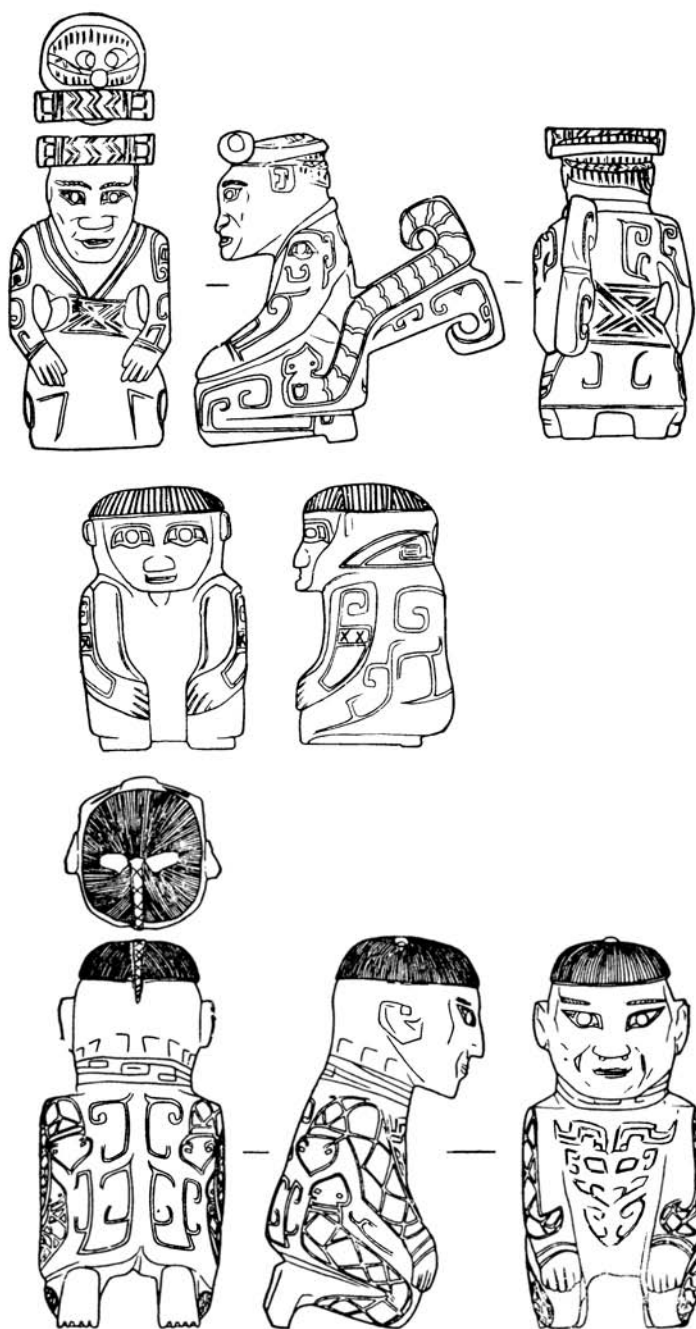


Figure 3.22. Jade and stone figures, tomb 5. *Yinxu de faxian yu yanjiu* (1994), p. 341.

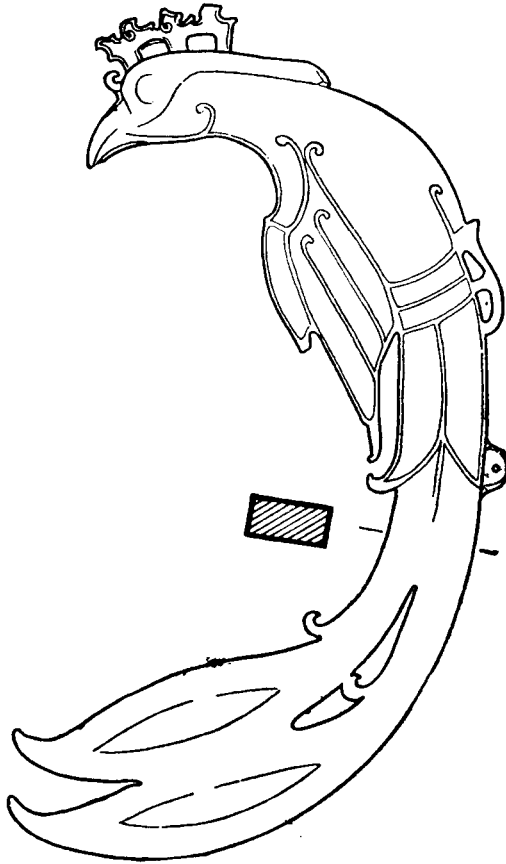


Figure 3.23. Jade phoenix from Shijiahe Culture, tomb 5, length 13.6 cm. *Yinxu Fu Hao mu* (1980), p. 165.

Bronze: Weapons and Chariot Fittings

Bronze casting at Yinxu had two foci: the weapons and chariot fittings considered here, and ritual vessels for cult (discussed in Chapter 4). Casting traditions outside Yinxu affected both. The *mao* spear point, for example, appears at Anyang in period II, after the time of Lady Hao, and was most probably developed in the Yangzi regions.¹⁵ Casting in the north also affected Yinxu weapons. Knives with animal head pommels, and some dagger-axes, have northern pedigrees. These interactions and the impact of Yinxu on other regions are treated in Chapter 5. The Institute of Archaeology has conducted extensive alloy analyses of weapons

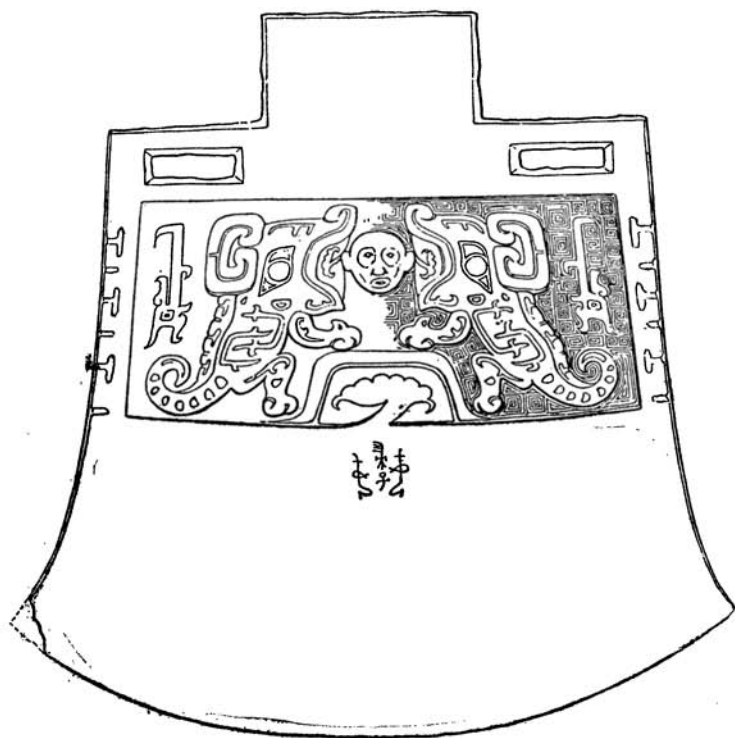


Figure 3.24. Bronze *yue*, tomb 5, height 39.5 cm, inscribed "Fu Hao." *Yinxu Fu Hao mu* (1980), p. 106.

and vessels from both tomb 5 and the West Zones. They revealed a range of compositions among Yinxu objects: almost pure copper, a mix of lead and copper, or of tin and copper, as well as the expected ternary recipe. This variety suggests conscious decisions by founders to tailor recipes in order to affect mechanical properties of the metal, color, or casting characteristics.

Writing in the mid-1980s, Chen Zhida of the Anyang Work Team estimated about 2,700 weapons, plus various tools and chariot fittings had been properly excavated from Yinxu. The actual number of tools, however, was small: perhaps one hundred knives of several types, six axes, sixty adzes, thirty chisels, twenty awls, and fifteen spades by Chen's count. Most tools are undecorated, but some carry motifs like those on ritual vessels. Since bronze wood-working tools and spades have been found in large burials, it has been suggested they were used for constructing the chamber and then left behind. Small knives are often found amid the debris of bone and bronze workshops at Yinxu, as they were at Erlitou

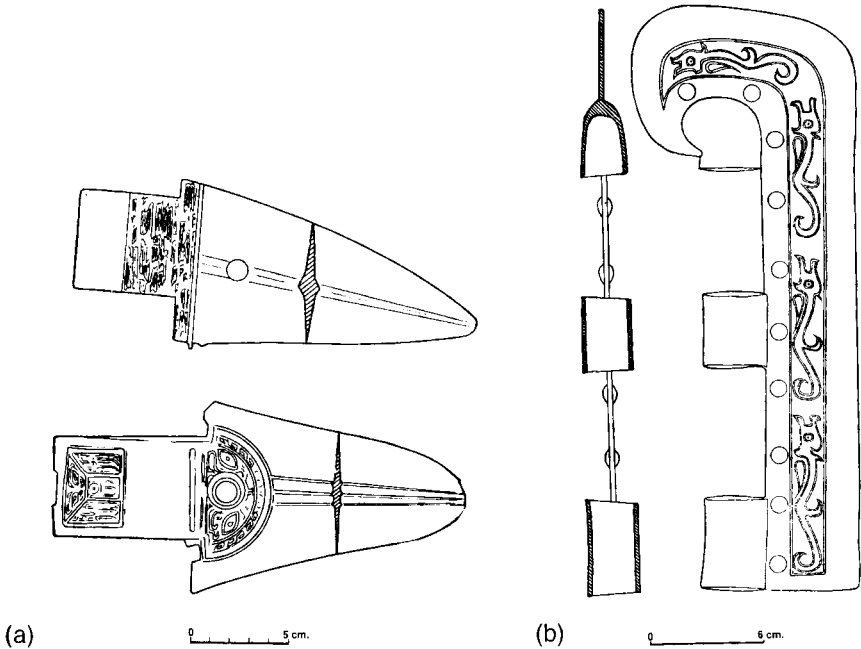


Figure 3.25. Weapons: (a) *zhuo* (*kuī*), Sanjiazhuang tomb 1 and West Zone tomb 279; (b) round knife, West Zone tomb 1713. *Yinxu de faxian yu yanjiu* (1994), pp. 311, 314.

and Zhengzhou, but so are bone and shell tools. The small number of bronze mirrors (four in tomb 5, one in M1005 at Xibeigang) should be imports, perhaps from the Gansu corridor. While it is clear that the foundries produced some utilitarian objects, that was not their main enterprise. Molds for weapons, on the other hand, were found at each of the four loci associated with bronze casting at Anyang, although only the foundry at Xiaomintun had significant numbers.

Bronze weaponry defined status in Shang warrior society. Among the tracts of the West Zones, Liu Yiman found that about one-sixth of burials had *ge* dagger-axes or other weapons.¹⁶ Rich burials, like tomb 5 at Locus North and tomb 169 at Guojiazhuang, had large quantities of weapons. The occupant of the latter was apparently a *ya*-lord, a military commander. The royal tombs held still larger quantities of dagger-axe blades and spear points, as well as arrow points, helmets, shields, and perhaps leather armor. In M1004 at Xibeigang, caches of weapons were unearthed where the south ramp met the shaft. Helmets (141) occupied the bottom layer. Spear points (731), half neatly bundled in 36 groups of 10 each, occupied the middle layer. Dagger-axes on shafts were topmost, in 3 bundles

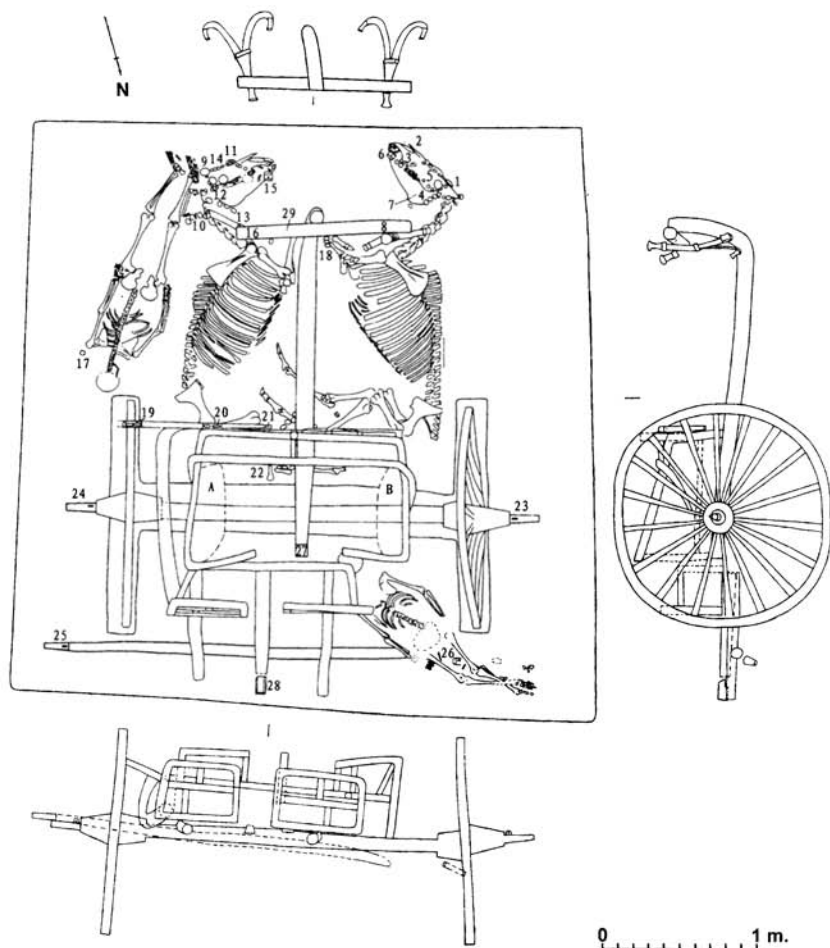


Figure 3.26. Chariot pit (M40), Meiyuanzhuang, Anyang, period III–IV, pit dimensions: 3.7–3.9 m (N-S) $\times$ 3.6–3.7 m (E-W). *Kaogu* 1998.10:49. This two-horse chariot was buried with two human victims, one of them perhaps a charioteer. Loess “fossils” of the wheels, box, draft pole, and yoke were preserved, with some original bronze fittings left in place. The wheels were 2.4 m apart, each 1.4 m in diameter with eighteen spokes. The axle measured 3.1 m long, the pole 2.3 m. The cab area was about 1.4 m $\times$ 0.9 m. Fittings included hub covers and various sleeves, collars, finials, and bosses.

(29, 21, and 19), each pointed in a different direction. This quantity suggests enough weapons for an entire corps of warriors.

Several weapon types must have served as tokens of rank. Prime among them is the large flat axe (*yue*), such as two found in tomb 5 (Figure 3.24). Too heavy to wield in combat, such axes were probably bestowed on commanders. Another weapon found in rich tombs assumed to be warrior burials is the *zhuo* (or *kui*), a triangular blade hafted by a tang to a long shaft (Figure 3.25a). This shape is commonly found in the north, and may in fact have been adapted at Yinxu from a northern prototype. Another unusual shape, the round knife, is limited to a few rich warrior burials (Figure 3.25b).

No evidence for Shang use of horses predates the Yinxu period. The first chariots appear in period II as fully realized, sophisticated machines pulled by two-horse teams. About two dozen examples have been excavated at Anyang sites, including Xiaotun North, Xibeigang, Dasikongcun, the West Zones, and Guojiazhuang (Figure 3.26). Chariot burials are found in several contexts. At Locus North, a cluster of five chariot pits may have been part of a sacrifice, although the poor condition of four of these pits eliminated many details. Chariots were also found at the royal cemetery, but details are still unavailable. The most common context for chariot burials was within cemetery tracts such as Dasikongcun, the West Zones, and Guojiazhuang. Here chariot pits probably were satellite burials associated with the tombs of high-ranking persons. Thus it would seem chariots belonged both to the royal family and elite lineages.

Yinxu foundries gave these wooden carts a variety of fittings for axle hubs, railings, draft poles, yokes, and yoke saddles, as well as traces and harnesses for horse teams. Since one or more human victims usually accompanied a team and chariot, we assume that drivers were put to death at the same time. About a third of the chariot burials also included weapons; some scholars thus conclude chariots were used in battle. If so, were they command vehicles, or actual battle wagons? They seem better suited to carrying a person of status than engaging in the bloody business of combat, especially on uneven terrain.

How did chariots come to Anyang? How could the Shang have adopted this technology, seemingly overnight?¹⁷ Statelets bordering the Shang on the northwest and perhaps the Shang themselves might have had contact with peoples who used chariots. But “contact” is a nebulous phrase. For either a statelet or the Shang to take over this vehicle required raising horses, mastering the skills of the wrangler and charioteer, and learning the carpentry of wheelwrights, among other things. None of these skills can be assumed prior to period II. Since very few chariots have been found outside Anyang (Xi’an and Shandong each offer one example), perhaps this was a royal endeavor shared with only a few lords. How and why the Shang king might have initiated such a project remains speculative.

Chapter 4

Shang Cult: Divination and Sacrifice

The development of oracle-bone studies has made our view of the Late Shang (or Yinxu) period categorically different from all earlier eras. History begins at Anyang, and so too does the study of those ideas and practices that characterized Shang society. The emphasis on cult in this chapter matches this evidence, both inscriptional and archaeological. More than any other factor we can isolate, the Shang royal cult held society together. The cult gave the king his role, his authority, and his place in history. The cult was both familial and societal, both a lineage matter and a political one. Status and relationships within Shang society as a whole were dictated by the royal cult and the family cults of less powerful lineages. The relationship of the Shang with other groups also depended on cultic definitions and practices. Not least, the place of the Shang people in the “natural world” was understood within the belief system of the cult. The cult and its practices were the *raison d’être* for much of what archaeologists recover at Yinxu. The temple-palace foundations, sacrificial tracts, royal tombs, many elite crafts, and bronze vessels, as well as the shells and bones themselves, were essentially objects of cult.

Oracle-Bone Divination

Materials and Process

The terms employed when discussing this topic differ in Chinese and English, and some of those distinctions are significant.¹ While “divination” denotes forecasting the future or plumbing the unknown in English, the Shang process was not precisely equivalent. Divination inscriptions may or may not be interrogatory. Indeed, many inscriptions seem to be incantatory or magical, as if voicing them had some efficacy itself. Many inscriptions show the Shang king seeking approval, albeit for a reduced

range of topics over time. The concept of an “oracle” is even less apt. Based on examples from the Classical world, one will think of a source of knowledge whose pronouncements were delivered through a priest or priestess. Those words were generally cryptic, perhaps riddles. By contrast, Shang divination was directed toward the ancestors in plain language, and offered them only a limited range of responses. These responses apparently came back through the king as clear speech. Even after a century of scholarly study, however, no one claims to understand fully how the king “read the cracks” and hence came to his prognostications. Over time only positive responses came from the divination process; the king as diviner became infallible.

The modern Chinese term used most frequently is “writings on shell and bone” (*jiagu wen*), a description of the physical materials used in divination rather than of the process (some writers prefer the phrase “crack texts” [*bu ci*]). Shells here are the bottoms of turtle carapaces called plastrons. The bones are the shoulder blades (scapulas) of cattle. (Hence more erudite scholars write of plastronomy or scapulimancy.) The use of two quite different materials may be evidence of two different mantic traditions that coalesced by the beginning of the Yinxu period. The use of shoulder blades can be traced back to the fourth millennium B.C.E. in the Northeast macroregion, and shoulder blades are found in many Longshan Age cultures. The major difference between Late Shang procedures and earlier ones seems to be in the preparation of the bone, especially the carving of hollows to control the position of cracks (Figure 4.1). Oracle bones (scapulas) have been found at many sites that predate the dynastic occupation of Anyang. Erlitou, Zhengzhou, Yanshi, Yuanqu, Dongxiafeng, Panlongcheng, and Taixi all yielded scapulas that were hollowed and burned. However, none were prepared in the carefully ordered fashion of Yinxu bones. (Zhengzhou and Taixi also had plastrons that similarly lacked ordered hollows.) Of all the pre-Yinxu examples, only one fragment of bone from Zhengzhou also bore an inscription. The widespread occurrence of scapulas suggests that some kind of divination was widely practiced prior to the Yinxu period at many sites we now label as “Shang.” It is unlikely that all of these sites had some kind of royal presence. Hence, it appears that other members of society practiced this mantic tradition.

Shells and bones were sent to Anyang by regional lords, but cattle and turtles may also have been raised there. Notations recording the number of shells or bones “sent in” (*ru*) or “coming in” (*lai*) by a certain party on a certain date are common.² In several cases, the quantities of scapulas or plastrons are astonishingly large, for example one thousand. This could have been a part of exchange among centers at this time, like the trade or tribute in glazed stonewares (see Chapter 5) and jades. The

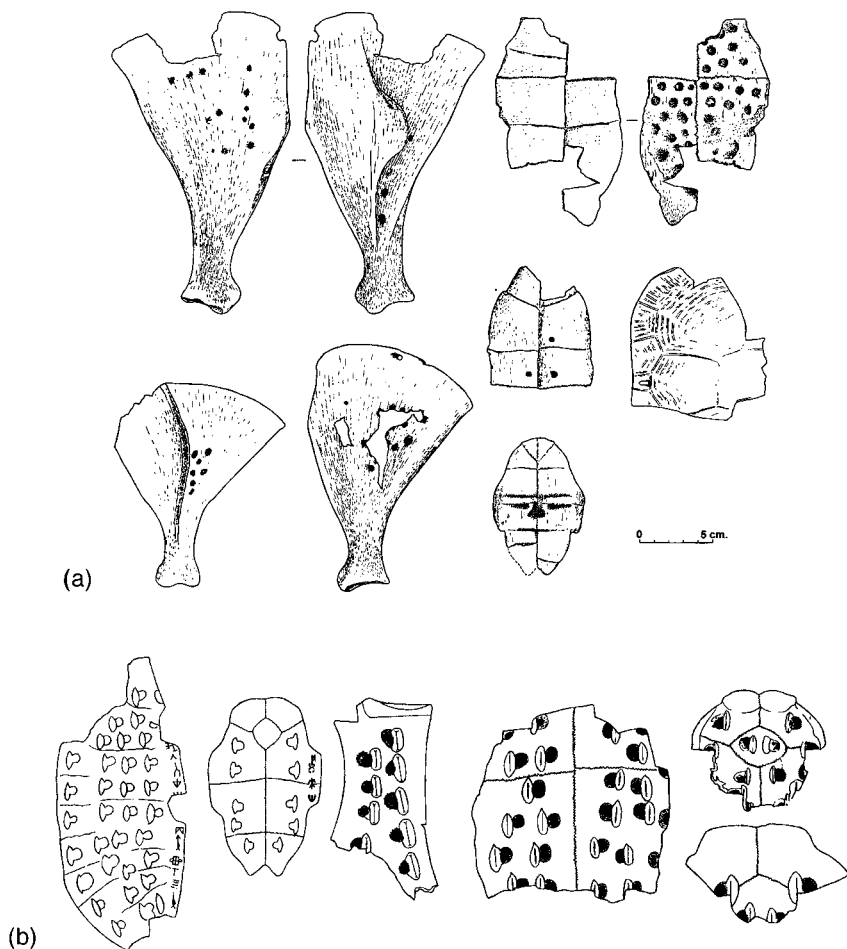


Figure 4.1. Hollows on scapulas and plastrons: (a) Lower Erligang period, Zhengzhou, *Zhengzhou Shang cheng* (2001), p. 683; (b) Yinxu periods, Anyang, *Kaogu* 1997.5:56.

prewar excavators of Locus North were told by locals of “pens” where turtles may have been kept or raised. Cattle certainly were available in large quantities, and most probably from nearby herds. The waste bone from their slaughtering was processed within Locus North as well as at Dasikongcun and Beixinzhuang. Cattle skeletons are also ubiquitous in the sacrificial tracts at Locus North and Xibeigang (see below). The quantities of shells and bones used can only be estimated. David N.



Figure 4.2. Scapula and rubbing, Locus West, Anyang, height 40.5 cm. *Chūgoku ōcho* (1993), pl. 62. This bone has prepared hollows both front and back with a total of eight inscriptions. David Keightley offers the following translation of one text: "In performing the lustration ritual for the Herdsmen [officers], to Ancestress Yi offer a fine [?] pig, to Ancestress Gui a boar, to Ancestress Ding a pig, to Ancestress Yi a pig." The remaining texts propose a similar range of ancestral targets and possible offerings" (David N. Keightley, in *The Golden Age of Chinese Archaeology: Celebrated Discoveries from the People's Republic of China*, ed. Xiaoneng Yang [Washington, D.C.: National Gallery of Art, 1999], p. 184).

Keightley suggests that six oxen and thirteen turtles would have been needed each ten days to yield the total volume of shells and bones he estimates for the 150 years in question.³ Preparations were extensive, involving cutting away the ridges (scutes) on the back of the plastrons, and sawing and slicing the thickened socket end of the scapulas. A specific method of carving hollows, usually on the back, was also standard Shang practice (Figure 4.2). Hollows consist of a vertically oriented oval depression and a tangent round hollow on one side. The two depressions created a very thin section of shell or bone where a heat-induced crack could be produced.

Shang diviners preferred to align their hollows in neat vertical columns, often in pairs of five placed at opposite sides of the shell or bone. Burning required application of intense heat, enough to singe the surface and create the *bu*-shaped crack. No convincing evidence for the tool (of wood or metal?) used to induce the crack has been offered. The cracking itself may have produced a “puck” sound as well as an unpleasant smell. Cracks visible on the front surface necessarily follow the prepared hollows on the back, but it is anyone’s guess how the king as diviner deciphered them. The angle of the short crack to the longer vertical crack varies, of course, but not dramatically (Figure 4.3). Since much divination involved two sets of five cracks each, the king may have observed a pattern in the multiple cracks, perhaps their cracking speed or sound. This was a controlled process, both by creating hollows in neat columns and by how the heating was performed. Since inscriptions were carved on the shell or bone after cracking was accomplished, one assumes notes were made at the time and then kept for reference when incising took place. If a diviner was employed to make the cracks and the king then read them, perhaps a scribe nearby took the necessary notes before an engraver (or the scribe?) cut the inscriptions at a later time. This putative division of labor stood on the shoulders of others in charge of obtaining materials and preparing them prior to divination.

Over the last century more than 200,000 oracle-bone fragments and pieces have been collected, both from looting and from proper excavations. Since 1928, several especially large deposits have been recovered at Anyang. The circumstances of these finds suggest that shells and bones sometimes were cached underground for safekeeping, but also could be disposed of with other waste. The 17,000 shell fragments from YH127 near the B Group foundations represent the largest single find (in 1934). This one deposit accounts for the bulk of the prewar total of 24,000 fragments. All are dated to the period of Wu Ding. The nearly 5,000 bones from Xiaotun Locus South (found in 1973), by contrast, were scattered among many ash pits and other features, often with pottery and other debris in association.⁴ The Locus South inscriptions date to the middle reigns at Yinxu. The more than 1,500 shells from Huayuanzhuang East (excavated 1991) are also significant.⁵ They seem to be a prepared cache, and like the other two great discoveries represent almost entirely one material. While these are early inscriptions (reign of Wu Ding), they appear to be divinations performed by princes (*zi*), not the king (*wang*). Finds made in association with other material, like pottery at Locus South, have had an impact on the periodization used at Anyang.

The 200,000+ figure probably only represents a small fraction of the original total, perhaps only 5–10 percent following Keightley. About

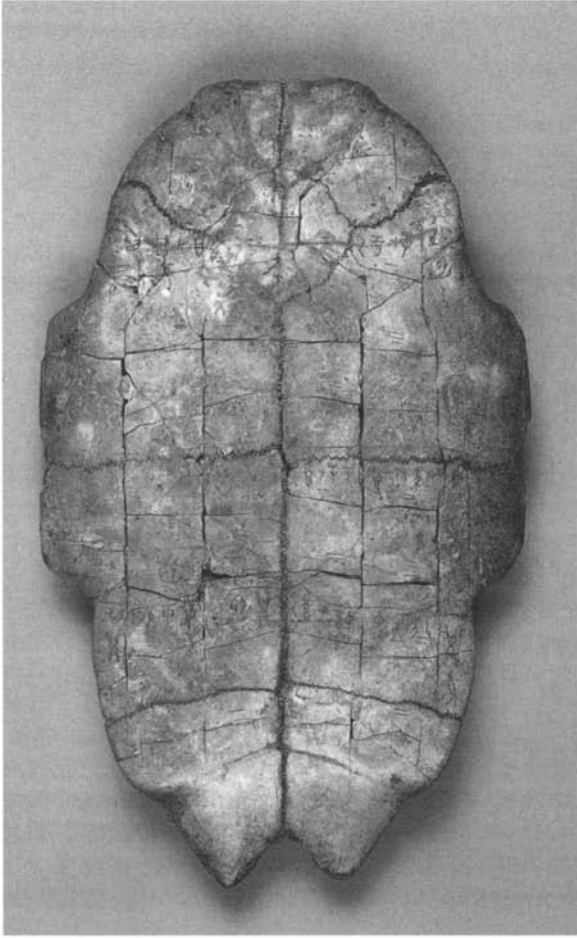


Figure 4.3. Plastron, Huayuanzhuang East. Anyang, length 19.2 cm. *Wenwu jinghua* (1997), pl. 106.

a quarter of the fragments are published, and about half of those were scientifically excavated. The total number of graphs represented is in excess of 3,000; some scholars believe about half can be read. Many oracle-bone graphs have later, descendant ones, or if not, can be understood from context. The bulk of the undeciphered graphs could be names. With only a few exceptions—especially Zhouyuan in the Northwest macroregion (see Chapter 5)—the inscriptions found on these shells and bones were a monopoly of the Shang court at Yinxu.⁶ The same script is, however, found on pottery (*tao wen*) at Anyang and some



Figure 4.4. Display inscription (Bingbian 247). David N. Keightley, *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* (Berkeley: University of California Press, 1978), fig. 12: (Preface:) Crack-making on *jiashen* (day 21), Que divined: (Charge:) “Fu Hao’s childbearing will be good.” (Prognostication:) The king, reading the cracks, said: “If it be a *ding* day childbearing,” it will be good. If it be a *geng* day childbearing it will be extremely auspicious. “(Verification:) On the thirty-first day, *jiayin* (day 51), she gave birth. It was not good. It was a girl.”

other sites. Bronze inscriptions, which are very widely distributed, also employed this script. Writing could also have been applied to perishable materials, but if so, they have not survived from this early period. Based on the evidence that has survived, it would seem literacy was not widespread.

In spite of difficulties, the inscriptions can generally be read because they are so formulaic, their vocabulary small and repetitive. Even when unrecognized terms are encountered, syntax and the surrounding, known graphs often make the general sense clear. A full inscription includes the following parts (Figure 4.4).⁷

(1) *Preface*. This short phrase gives a day-date, the graph for “crack-making” (*bu*), the name of the diviner, and the graph by custom rendered “divined” (*zhen*). Only twenty-two graphs were needed for day-dates, combining the “heavenly stems and earthly branches” (*tian gan di zhi*), as they were known in later periods. Paired in a strict sequence, these ten- and twelve-graph series created the sixty unique combinations of a sixty-day cycle. In later times, this sequence of combinations was used to designate years. This is a direct gift from the Shang to later Chinese cultures. When a divination concerns an ancestor, it will be observed that the day-date of bone cracking usually corresponds to the stem used to designate that ancestor (“Father Ding”). The rationale is not known. Does the stem denote the ancestor’s birth or death date (“a *ding* day”)? Or does it refer to a lineage group? Presumably the day-date documents the pertinence of the cracks. It is also the beginning of historical record-keeping in East Asia.

“Diviners” (modern term *zhen ren*) were first recognized by Dong Zuobin, and their identification in part stimulated Dong’s initial efforts at dating inscriptions. About 120 diviners are named, most from the early periods, especially Wu Ding’s reign. In recent years, “diviner groups” have become a standard for dating inscriptions. These groups were active across king reigns, and probably were drawn from lineages closely associated with the royal family. Different diviners and groups manifest different calligraphy, as well as some variations in inscription syntax or expression. They also often make references to common names and affairs. In late period inscriptions, however, the king alone acted as diviner.

The term rendered “divined” (*zhen* or *zheng*) is generally thought to be a picture of a *ding*-tripod. No divination locus with shells or bones left at the scene has ever been excavated, so any actual association of tripods and crack-making cannot be ascertained. The word for tripod may simply be a homophone for the term we render “divine” or “enquire.” But in as much as making cracks required a fire where a *ding* could have been placed, and since offerings prepared in a *ding* may have attended the divination or followed from it, the graph itself may offer some ancillary evidence for the practice of divination. A divination certainly was ritualized behavior. (See Box 16 for an imaginative recreation of the divination process, by David N. Keightley.)

(2) *Charge*. This modern term denotes the main text of an inscription. It may be found without a preface or with an abbreviated one. In early period inscriptions, the charge is often stated in both positive and negative versions and sometimes abbreviated. Although modern scholars frequently append a question mark, and many consider these texts interrogatory, it is by no means certain that is actually the case.⁸ Many charges are single statements, seemingly seeking approval of a proposed

Box 16 David N. Keightley: Divination as Process

The sun's rays glint first on mountains to the west, then, moments later, touch the thatched roofs of the temples and pit dwellings that follow the curve of the Huan. The river, still in shadow at the foot of the earthen cliff, winds to the southeast between clearings of sprouting millet, on its way to merge with the powerful He. The year is the eleventh of Wu Ding's reign, the season spring, the day *xinwei*, eighth of the week.

Filtering through the portal of the ancestral temple, the sunlight wakens the eyes of the monster mask, bulging with life on the garish bronze tripod. At the center of the temple stands the king, at the center of the four quarters, the center of the Shang world. Ripening millet glimpsed through the doorway shows his harvest rituals have found favor. Bronze cauldrons with their cooked meat offerings invite the presence of his ancestors, their bodies buried deep and safe across the river, but their spirits, some benevolent, some not, still reigning over the royal house and the king's person. One is angry, for the king's jaw ached all the night, is aching now, on the eve of his departure to follow Zhiguo on campaign against the Ba-fang.

Five turtle shells lie on the rammed-earth altar. The plastrons have been polished like jade, but are scarred on their inner side with rows of oval hollows, some already blackened by fire. Into one of the unburned hollows, on the right side of the shell, the diviner Que is thrusting a brand of flaming thorn. As he does so, he cries out, "The sick tooth is not due to Father Jia!" Fanned by a assistant to keep the glowing tip intensely hot, the stick flames against the surface of the shell. Smoke rises. The seconds slowly pass. The stench of scorched bone mingles with the aroma of millet wine scattered in libation. And then, with a sharp, clear, *puk*-like sound, the turtle, most silent of creatures, speaks. A *bu*-shaped crack has formed in the hollow where the plastron was scorched. Once again the brand is thrust, now into a matching hollow on the left side of the shell: "It is due to Father Jia!" More time passes . . . another crack forms in response. Moving to the next plastron, Que repeats the charges: "It is not due to Father Jia!" *Puk!* "It is due to Father Jia!" He rams the brand into the hollows and cracks the second turtle shell, then the third, the fourth, and the fifth. David N. Keightley, (*Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* [Berkeley: University of California Press, 1978], p. 1).

action. Sometimes the charge is a topic for consideration. Additional phrases (subcharges) may follow in which a series of options (like different dates, ancestors, or amounts of cult) are proposed. The range of topics found in charges constitutes our window into the Shang world.

(3) *Crack notations*. The numbers of the cracks, sometimes with notations like “auspicious,” were also recorded on the shells and bones and perhaps announced.

(4) *Prognostication*. This is usually a restatement of the charge with result specified prefaced by the phrase “the king reading the cracks said” (*wang zhan yue*). The oral, performative aspect of divination emerges clearly in this formula. Perhaps the king or the diviner uttered the charge before each crack was made and its report heard. Repetition of the charge and subcharge by these one or two voices must have become an incantation. Some one was auditing, probably more than just those persons actually working at divination. Perhaps the ancestors were listening. Perhaps the king’s coterie in attendance.

(5) *Verification*. Most oracle-bone inscriptions are no more than prefaces with charges. Only a small percentage have prognostications and verifications. The latter was a final repetition of the charge couched as a phrase like “It really did rain” or something equally apt. Verifications always show the king to be correct. We may assume they are an edited record, passing over judgments that were not confirmed. The verification is usually found on the back side of scapulas, but in what some scholars call “display inscriptions” they are run-on with the other parts as a continuous text (see Figure 4.4).

The topics addressed in divination charges were extremely wide-ranging in the early period. Diviners of Wu Ding’s era inquired about rainfall, the king’s health and dreams, sacrifices (both regular and ad hoc), childbearing of royal consorts, warfare, harvests, settlement building, celestial events, relations with statelets (*fang*), the outlook for the night or the next ten-day week, and more. Charges and subcharges were profuse, as the diviner attempted to discover a proper “response” concerning the timing of a sacrifice or number of victims. The charges create the feel of a system that is vital and changeable, rather than rigid and predictable. By the last two reigns, however, all of this had changed. Topics are limited to a set of five regular sacrifices, forecasting the ten-day week or coming night, and hunts and campaigns. Rather than a plethora of charges and subcharges, texts are straightforward with ordained outcomes. The king seems to be more in control, the spirits less important. Divination, once central to daily routine and seemingly invoked on any pretext, was restricted to a few concerns. These changes took place over a century between Wu Ding and kings Di Yi and Di Xin (see Table 3.1).

Attempts to date inscriptions began almost from the inception of oracle-bone scholarship. The first collectors had already noticed the names of Shang kings and ancestors recorded in Sima Qian's "Basic Annals of Yin." When Dong Zuobin began to investigate the matter, he devised ten criteria for dating, including generational terms, diviner names, and calligraphy. Terms used for the ancestors were key. These terms express generational relationships rather than biological ones. A "father" (*fu*) or "grandfather" (*zu*) might be an uncle or granduncle, but his relationship to the junior generation is clear. A "Father Ding" or "Grandfather Yi" often can be linked to a specific ancestor within the royal lineage. While much of the royal genealogy as transmitted by Sima Qian is found among the inscriptions, not all of the latter has been substantiated. The association of certain diviners with certain kings has also proven extremely useful. Several diviners' names on a single shell link their periods of activity, and by extension then may date other inscriptions. The writing of certain graphs likewise seems to have evolved over time. Certain forms are characteristic of one period or another (this also applies to bronze texts), although some doubts about these correlations have been raised by the discovery of "nonroyal" inscriptions at Huanyuanzhuang East.

Royal Cult and Worldview

We can reconnoiter religious beliefs and practices with archaeological evidence, even for very remote periods. But we cannot identify explicit concepts until the appearance of the oracle-bone inscriptions of the Late Shang period. Many of the terms found in these inscriptions were already familiar to Chinese scholars even if other things about the texts were strange and peculiar. Studies have shown that some of the logic of later Chinese societies was in fact already in place by the Late Shang. How far back particular beliefs extended, however, is another matter. Certainly many Late Shang religious practices had proximate roots in the preceding archaeological cultures of Henan, both Erligang and Erlitou. Temples, burials, and ritual deposits at Yinxu all have precedents in these earlier periods, but the lack of writing from earlier periods makes it impossible to demonstrate what concepts were current in those eras. From the Late Shang period forward, however, one can trace a continuous development of ideas about life, death, the natural world, and other fundamentals.

The most powerful spirit known to the diviners of Late Shang was Di (or Shang Di). Although many ingenious etymologies have been offered, the significance of this term remains unknown. Di may have been a very remote, and hence powerful and inaccessible, ancestor or group

of ancestors. He (or it) certainly had the ability to bring down both good and ill fortune on the Shang, and he seems to have exerted control over various nature powers as well. The term has a long life in later Chinese cultures. Some sense of Di must have informed the thoughts of late Zhou period scholars who wrote about an age of "Five Sovereigns" (*Wu di*), who in turn created many of the building blocks of culture. Offerings to several Powers (also Di) were a part of Qin and Han practice. And when the duke of Qin unified the world in 221 B.C.E., the same term was selected as part of his new title, *huang di* ("august sovereign") usually rendered "emperor." Di shares some qualities with the supreme Zhou deity, Tian (Heaven). But the Zhou made the claim that their founder ruled by the "mandate of Heaven" (*Tian ming*), while the Shang felt it unnecessary to offer such justification.

Nature powers also appear in the inscriptions. They seem to account for many features and workings of the natural world: sun and moon, clouds, rain, thunder, the four directional winds. Offerings to these powers make a great deal of sense in an agricultural society like the Shang. Acute observation of weather events and celestial phenomena are also significant among the inscriptions, including early eclipse and even sun-spot records. Parts of the natural landscape also appear as powers. The river (*he*) and mountain (*yue* or *yang*) powers probably designate the major topographic features of the Shang world centered on Anyang, the Yellow River and the central holy mountain, Mount Song, between Zhengzhou and Luoyang. In some ways these nature powers act like servants of Di at his "court." They respond to him, but do not share his exalted status.

Ancestral spirits are the most common supernatural figures in the inscriptions. The royal lineage of dead kings extended over twenty-eight generations by the end of the dynasty. The lineage also incorporates more remote figures, some of whom reappear in later Zhou mythologizing accounts, like Wang Hai and Yi Yin (see Box 10). The recognition that some ancestors named in the oracle-bone texts matched the Shang king list as recorded by Sima Qian first excited scholars. There is no Xia king list in these inscriptions, however. The main Shang royal lineage, Da Zong, consisted of kings who ruled (or received cult as if they did); other branches are also known, as are some consorts. Since some inscriptions are now understood to be "nonroyal," hence not created by or for the Shang kings, we also apparently have the names of ancestors from other lineages of the Shang, such as princes.

In comparison to Di or the nature powers, the ancestor spirits were accessible to the king, who after all was their living descendant. He in fact had a monopoly on the ability to communicate with them, a powerful legitimating characteristic. The living heads of other, lesser lineages

must have had similar status in their own lineages. The royal ancestors might appear to the king in dreams or through various maladies, like a sore tooth. Both were topics that were divined; identifying the ancestor spirit responsible was the first step toward curing a toothache. Regular divination about sacrificial obligations to the ancestors is the bread and butter of Shang ritual practices especially in the reign of Wu Ding. The well-being of the king and his people depended upon their ritualized feeding. More important, the ancestors could intervene with nature powers and Di, and hence affect fundamental matters impacting all Shang society. The more remote the ancestors, the more powerful. This sense of “generationalism” is a defining trait of later Chinese societies, as David Keightley demonstrated.⁹

The inscriptional record shows a complex ritual system in place from the beginning of Wu Ding’s reign. It seems unlikely that such practices first appeared at Yinxu, but little comparable earlier evidence has yet been found, except the burned and cracked bones mentioned above. There is much attention in the inscriptions to timing, recipients, and quantities of cult to be offered to specific ancestors. Most divinations were scheduled to take place on the stem-day that matched the ancestor’s name. More than two dozen diviners drawn from elite lineages assisted Wu Ding, whose own life must have been dominated by these activities and the sacrifices that ensued. By the last two reigns, Di Yi and Di Xin, on the other hand, the situation had changed. A strict five-sacrifice schedule was in place; divinations notified the ancestor spirits and sought only their pro forma approval. Diviners drop out of the picture, and the king alone was in charge. Keightley believes these divinations are more magic than divinations in the narrow sense. Just as these differences in practice are apparent in the inscriptional record itself, we should assume that other differences distinguished cult belief and ritual practices over time, and certainly over space. Even though the same ritual vessel types were employed in the Erligang Culture and in the Yinxu period, we should expect beliefs and practices went through changes between these two periods.

A fundamental assumption of this cult is the common needs of the living and the dead. Obligations of the living to their elders were not ended by death; they simply altered. Status transcended death, and the requirements of an ancestor were not much changed by physical mortality. Thus a sacrifice was much like a banquet, and the furnishings of a tomb were much like the possessions of a living person. In fact, death became a kind of promotion, since even a new ancestor was more powerful than the living king. Funerals and burials thus assume signal importance. They commemorated the dead and carried the spirit into a new realm and a new relationship with the living. The craft industries of

the elite kept them housed, clothed, fed, and armed in life. These same industries were marshaled for the needs of the dead and of the living who served them.

The royal burials at Yinxu, “the great settlement Shang,” were a fundamental component of the cult center at this site. Communication with the ancestors was most efficacious in their neighborhood. Oracle-bones have been found in insignificant quantities throughout the Anyang region. They are only found in quantity in proximity to the foundations of Locus North (such as YH127, Locus South, Huayuanzhuang East, all within the ditch). Some inscriptions record divination at an encampment away from Yinxu as a part of their preface. Nonetheless, those shells and bones were returned to the “great settlement” before being buried. The sacrificial tracts at Locus North are matched by equally extensive tracts at Xibeigang. The living king did homage to his ancestors at both locations.

Ritual Spaces and Sacrifice Ritual

Modern archaeology offers modest insights into the actual altars and temples at Yinxu where offerings were made. Oracle-bone inscriptions make references to “temples” (*zong*) of certain ancestors. Others terms attested both in bone inscriptions and bronze texts name parts of a temple compound: *tang* (“elevated hall”), *ting* (“courtyard”), and *men* (“gate”), for example. Unfortunately, the Locus North foundations (see Figure 3.3) were densely laid out and incompletely preserved and excavated. It is hard to discern ancestral temple plans among them. The newly reported D Group (see Figure 3.8), southeast of the clusters known from prewar digs, may offer evidence of a compound (*ting*), not unlike better known examples from Erlitou (see Figure 1.2) and Erligang Culture sites (see Figure 2.10). The sacrificial tracts discussed below may be the yards for nearby halls, but if so, the area was open on several sides rather than completely enclosed. Many foundations are quite thick, and some would have elevated a hall floor. But there is no evident plan to the whole ensemble of A and B Group foundations that suggests the symmetry, north-south orientation, or gated, enclosed yards we would expect. In Zhou custom, the ancestors were conceived as belonging to two subgroups. Their temples were supposed to follow this two-part division by left and right placement. No such plan can be isolated at Locus North, although K. C. Chang believed such a two-part division of the royal lineage existed. (On the other hand, a two-part division certainly governed the royal cemetery at Xibeigang, as Chang noted.) Locus North demonstrates a quantum leap in ambitious architecture, but the plans do not fit neatly into an evolutionary progression

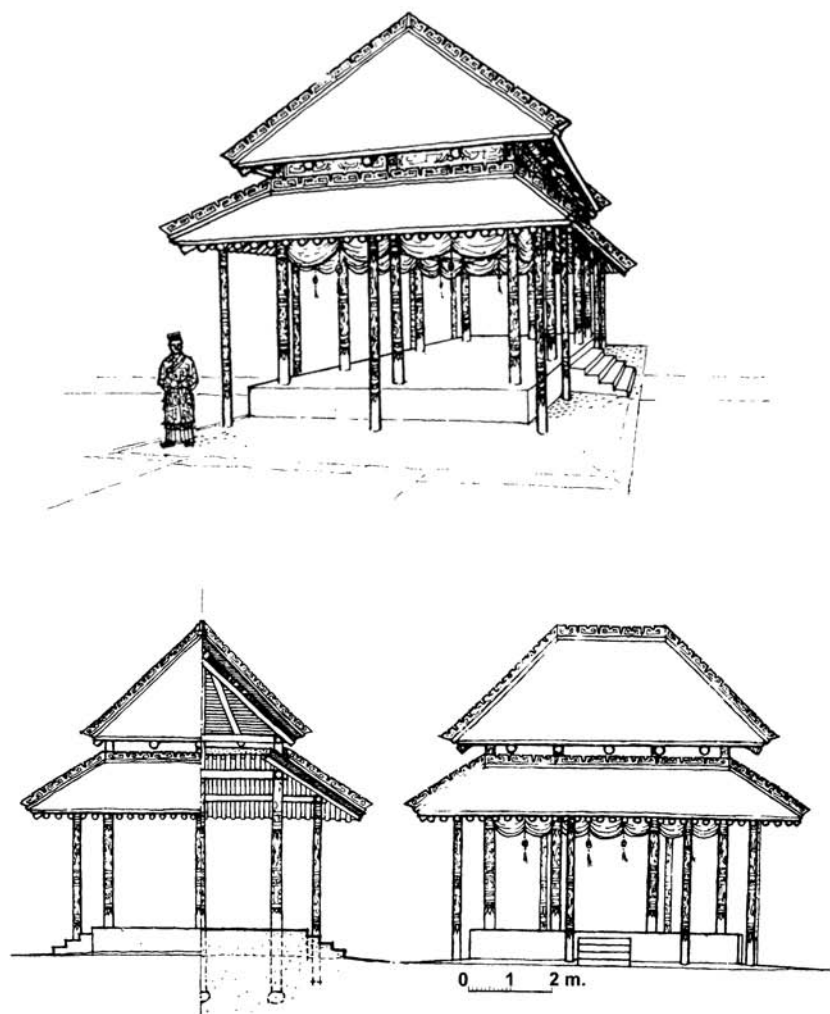


Figure 4.5. Offering hall, tomb 5, Locus North, rendering by Yang Hongxun. *Wenwu* 1988.6:65.

from Erlitou to Yinxu. The manifold evidence for sacrifice, however, makes the likelihood of offerings and sacrifice inside nearby structures high.

A well-preserved foundation atop the tomb of Lady Hao may be the best evidence to date for an ancestral altar or mortuary temple at Yinxu (Figure 4.5). This foundation was a large rectangular block measuring

6.5 m × 5 m north-south by east-west. Post holes and plinths left in place suggest a structure three bays across (north-south) and two bays deep (east-west). Yang Hongxun, of the Institute of Archaeology, concludes the structure faced east with steps aligned on the central bay. Pounded earth bases for posts off the platform around its perimeter indicate a skirting secondary eave protected the foundation. As an altar or *tang*-hall, the structure is restored without walls. The roof line in Yang's rendering mimics the four-sloped lid of Late Shang *fangyi* vessels, but is also consistent with graphs that show pitched roofs. Several blocks of pounded earth over tombs have been found at other cemetery sites, notably Dasikongcun, but none has been restored. Whether or not the royal tombs had such altars remains obscure, since each shaft was thoroughly dug away by looters, completely removing surface features. The fact that Shang cemeteries generally do not show later graves intruding on earlier ones suggests above-ground markers of some kind.

Like divination, sacrifice was a defining feature of Shang ritual. The oracle-bone inscriptions are rich in charges related to sacrifice. We find statements about the ancestors, either singly or in sequences running down the lineage tree, as the recipients of cult. We have a specialized vocabulary of ritual procedures, many interpreted as various forms of butchering (cleaving, splitting, decapitating). There are enumerations of quantities of cult: the numbers of cattle, sheep, or Qiang victims. And we have an array of specific rites: from burning and drowning rites to the five strictly scheduled rituals that dominate the late periods. All these divinations presumably had some real life corresponding activity in the vicinity of the temples or tombs. Moreover, most rites would have required a support system and assistants to carry out. The archaeological record does bear out some of these practices.

The first extensive evidence for sacrifice came with the investigation of the B Group foundations of Locus North. South of B-7 and north and west of B-12, several arrays of pits were opened (Figure 4.6). A small number were burials under or in the floors of foundations. In retrospect most scholars have concluded these were sacrifices related to construction or perhaps sacrifices offered while a temple was in use. The majority of the pits, however, were laid out in neat rows in the open area south of B-7. Near the foundation was a group of five chariot burials: three in a north-south row each with a single chariot, two horses, and three human victims, another burial to the northwest with one (or two?) chariot(s), and a fifth burial to the northeast too badly damaged to assess. The excavators associated 49 additional pits with this chariot formation. Most of those pits held decapitated skeletons, a few intact skeletons, and a few children. Two pits (YM238, YM188) held bronze ritual vessels, but seem not to have been ordinary graves. These are rare

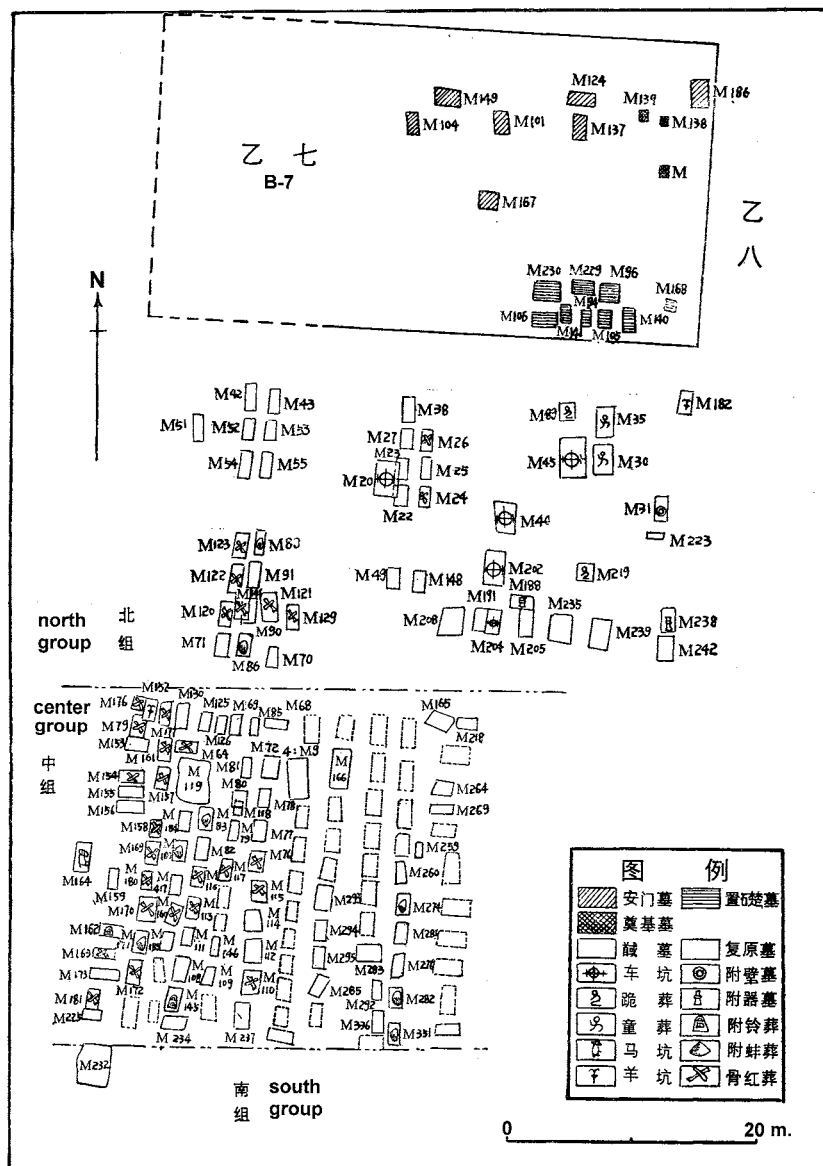


Figure 4.6. Sacrificial tracts, Locust North. *Yinxu de faxian yu yanjiu* (1994), p. 61.

examples of bronze vessels consigned to sacrificial pits, perhaps comparable to Zhengzhou (see Box 9). Further south was an even denser array with twelve rows, most oriented north-south, totaling eighty pits. Here sacrifices were varied; a majority held three human skeletons, but one pit had thirteen. Some pits held animals including horses, sheep, and dogs. The most common treatment of human victims was decapitation with the corpse face down. Both features are stark contrasts to ordinary burials, which are intact and supine. This same area included one proper grave (YM232), dated to Yinxu period I, and, slightly further north YH127, the period II pit holding 17,000 oracle-bone fragments.

The other area with extensive tracts of sacrificial pits was the Xibeigang royal tombs (see Figure. 3.4). In the three seasons of 1934–35, more than 1,200 pits were uncovered, most at the east end on the north, west, and south margins of M1400. These pits have been mapped, some of their contents (notably bronze vessels) published, but as yet no detailed record of all pits and their contents has appeared. Still more sacrificial pits came to light in 1950, when the two-ramp tomb at Wuguancun was excavated, and more were located in campaigns conducted in 1976 (250 pits) and 1978 (40 pits), southwest of M1400 and in the south-central portion of the royal cemetery. The Anyang Work Team now counts 1,483 pits cleared, and suggests as many as 2,500 exist.

The Work Team believes that most pits in the same row were the result of a single sacrifice. So the 191 pits cleared in 1976 are interpreted to represent 22 sacrifices, each with multiple pits and hundreds of victims (the largest group had 339 victims). The victims were mostly male, with some females and some children. Treatment of the dead is comparable to evidence at Locus North. Whole skeletons (2–11 per pit), decapitated skeletons (1–10 per pit), skulls only (3–39 per pit), and headless skeletons (1–12 per pit) were found. Some victims were bound and buried alive. Many were butchered. In addition to decapitation, skeletons were severed at the chest or waist, and some long limbs were cut. It is supposed that many of these victims were captives, especially the Qiang people mentioned in oracle-bone inscriptions. A number of sacrificial pits at the locations above were filled with animal remains: horses most commonly, but also sheep, pigs, dogs, even elephants and birds. Bronze ritual vessels and ceramics, however, are rare in sacrificial pits.

Other sites of sacrifice are known, such as a pit on the south slope of the Hougang mound (Figure 4.7). This circular shaft was 2.8m deep and more than 2m in diameter, with hard-pounded base and walls. Human remains were found in three discrete layers, with an estimated twenty-five, twenty-nine, and nineteen victims respectively. The victims were put to death in various ways and found in several postures. The top layer had a number of ritual vessels, including the *Shu Si Zi ding* (see



Figure 4.7. Sacrificial pit, Hougang. *Yinxu fajue baogao* (1987), p. 268. This sketch of the top layer in the pit plots the skeletons and skulls of twenty-five human victims (nos. 1–25) as well as the bronze ritual vessels and weapons, ceramics, and other offerings (cowries, grain, and textiles, A–P).

Figure 4.20), which carries the longest bronze inscription ever recovered at Yinxu. The pit is dated to period IV, the last two reigns at Anyang. Only a few other pits with large numbers of victims have been found outside Locus North and Xibeigang. Since ramped tombs were sited at Hougang, this pit may have been a sacrifice to ancestors buried there, or perhaps an offering to the Huan River power.

Human sacrifice was a shocking discovery for the first generation of Anyang archaeologists. Traditional texts do refer to the custom of “following in death” at the burial of a lord or king. As late as the First

Emperor of Qin (d. 210 B.C.E.), persons were put to death during the emperor's funeral. But servants or concubines interred in their own coffins are quite different from humans slaughtered and buried like animals on a large scale. The context for these offerings, feeding the ancestral spirits, is explicitly detailed by oracle-bone inscriptions. They took place in conjunction with the construction of temple structures, as regular sacrifices in temple precincts and at royal tombs, both during the funeral and thereafter, and less often in other locales. At the tomb of Lady Hao there were sixteen human victims and six dogs. In the West Zones and elsewhere, chariots are often found with human skeletons, presumably driver and warriors (see Figure 3.26). The Shang may have made distinctions between servants who followed their lord in death (a custom perpetuated during the Zhou), and victims slaughtered as offerings. These sacrifices were complemented by rites that feasted the ancestor spirits with meat, grain, and wine using bronze vessels.

Bronze Ritual Vessels

Long before twentieth-century scholars began intensive studies of the oracle-bone inscriptions, their predecessors collected ritual vessels from the "Three Dynasties." Interest in ritual bronzes and jades was well established by the Northern Song period (960–1126). Even earlier, in the Han and Tang dynasties, however, we find clues in the histories that the discovery of ancient vessels sometimes occasioned great interest at court, so much so that an era might be renamed to commemorate the event. And since ritual was a constant concern of court scholars, we can assume that the implements used and procedures followed were debated constantly, often by evoking evidence about the past. The Northern Song period, however, witnessed new important developments. Although true archaeology did not take place, the area of Ye, which includes modern Anyang, was already identified as a source of ritual vessels. With collecting, scholars began cataloging vessels. For this purpose, they selected names for specific shapes (types) drawn from ritual canons, and developed a vocabulary for motifs. Many of their scholarly choices continue to be employed in studies of Shang and Zhou bronzes even today.

The prewar excavations at Anyang produced the first large corpus of authentic excavated vessels (about 175) with secure provenance. Initial studies focused on their typology and casting; Li Ji led the way in both efforts. Non-Chinese art historians began to address bronze vessels seriously only in the 1940s and 1950s, at a time when most data from the Anyang excavations were still unpublished. Not surprisingly, they emphasized collections outside China, which were more accessible if unprovenanced (Box 17). By the late 1970s, the number of vessels excavated

Box 17 Max Loehr and His "Five Styles"

Several generations of American art history students have learned a description of Shang bronze decoration often referred to as "Loehr's Five Styles." The author of this construct, Max Loehr (1903–88), was professor of art history at the University of Michigan at the time he first published it. Trained in Munich, and having spent a decade in China, 1940–49, Loehr established himself as one of the first professional art historians to engage topics in Chinese art. From Michigan, Loehr went to Harvard, where he held the Abby Aldrich Rockefeller Chair (1960–74). There he published a series of catalogs—notably, *Ritual Vessels of Bronze Age China* (New York: Asia Society, 1968), and the Winthrop collection of Chinese jades in the Fogg Art Museum (1975)—as well as stimulating articles on fundamental issues in Chinese painting and Chinese art more broadly. His students, including Virginia Kane, Louisa F. Huber, and Robert W. Bagley, have published much of the modern art-historical literature on Shang bronzes.

"The Bronze Styles of the Anyang Period (1300–1028 B.C.)" (*Archives of the Chinese Art Society* 7[1953], 42–53), applied rigorous formal analysis to vessels of the Shang period. Loehr was intent on establishing a relative sequence taking into account vessel shape, decoration, and technical characteristics. "However, once a style has been recognized, even a fragment or detail (as part of an organized whole) should be sufficient to reveal its place" (p. 42). The five styles trace vessels from relatively primitive shapes with "thin relief lines" to "architectonic and severe, occasionally menacing" shapes with their "monumental heaviness" and bold relief.

Loehr's general sequence holds up very well fifty years later, but its chronological and archaeological import have been amended more than once. Excavations at Zhengzhou, Huixian, and Panlongcheng in the 1950s and 1960s confirmed the logic of Loehr's first three styles as the beginning of large-scale bronze casting during the Erligang Culture. Thus Loehr's "Anyang" styles actually embraced the early stages of Shang casting, not just its late segment. On the other hand, Loehr's final two styles, characterized by "coherent, sharply silhouetted animal figures" set off by *leiwen* (squared spiral) ground patterns or by relief (Figure 4.8), were shown with the discovery of tomb 5 (1976) to be characteristic of the early Anyang occupation (in archaeological parlance, Yinxu periods I-II). Thus the "styles of the Anyang period" do not actually

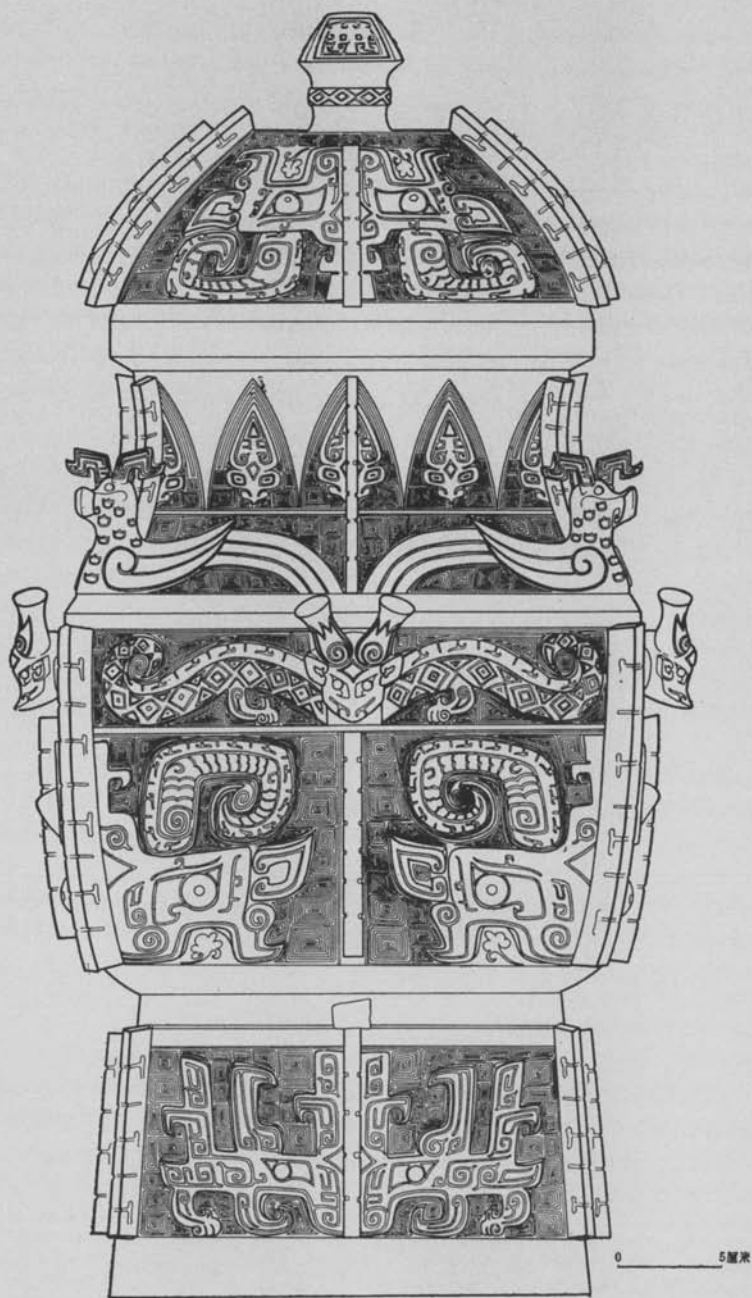


Figure 4.8. Si Qiao Mu Fanghu, tomb 5, Yinxu period II, Locus North, height 64.4 cm, Loehr Fifth Style. *Yinxu qintongqi* (1985), fig. 26.

cover all of that time frame. Moreover, while Loehr himself stressed a holistic approach, most applications of his descriptive scheme have shortchanged vessels decorated with designs other than the animal mask and dragon motifs that best conform to his astute observations. Nonetheless, Loehr's powerful description gave order and sense to one of the great contributions of Shang culture.

from Yinxu alone had reached about 600, including those from the tomb of Lady Hao and the West Zones. Many vessels from other archaeological finds were also published and exhibited. Over the last quarter-century, scholars both in and out of China have considered bronze vessels from several perspectives: (1) as evidence for the piece-mold casting technology; (2) as components of archaeological assemblages; (3) as objects that can be analyzed by their style; and, (4) as possessions of lineages named in their inscriptions. Properly excavated and reported Late Shang vessels now outnumber those in collections outside China. Unpedigreed vessels are now normatively discussed in relation to their excavated analogues.

Types and Functions

Grave assemblages with bronze vessels first appeared at Erlitou and Erligang Culture sites. For the Late Shang period, however, the volume of evidence is both many times greater and offers more avenues for analysis. Here we consider the major Late Shang vessel types and their functional roles as those can be inferred from context.

The most common bronze vessel types at Yinxu are *gu* drinking goblets and *jue* pouring cups, normally found as a pair. *Jue* were among the first vessels to appear in bronze at Erlitou (see Figure 1.10); *gu* of that period, however, were pottery or perhaps lacquer ware. My database of some 843 vessels excavated between 1928 and 2001 at Anyang sites includes 180 *jue* and 203 *gu* from all finds reported through 2004 (Table 4.1).¹⁰ Both types are wine vessels, designed for a single person's consumption. They would seem to be complementary in functions, warming and pouring versus drinking. This pair makes up the nucleus of most assemblages; several pairs of *jue* and *gu* are generally indicative of richer graves, and hence higher status. Each type may be found in multiples that match each other in size, shape, decoration, and inscription. For example, in tomb 18 (period II) at Locus North, four of five *jue* matched each other. In tomb 160 (period III) at Guojiazhuang, ten *jiao*

TABLE 4.1. Census of Excavated Bronze Vessels

<i>Period</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>Undated</i>	<i>Total</i>
<i>a. Pod base types</i>						
<i>Ding</i>	8	51	21	23	29	132
<i>Li</i>	—	8	3	5	7	23
<i>Xian (Yan)</i>	2	9	2	4	3	20
<i>He</i>	1	6	1	1	2	11
<i>Jia</i>	3	15	7	4	21	50
<i>Jue</i>	4	74	27	32	43	180
<i>Jiao</i>	—	—	10	—	2	12
Total						428
<i>b. Ring base types</i>						
<i>Gui</i>	—	9	11	11	11	42
<i>Yu</i>	—	7	—	—	4	11
<i>Pan</i>	—	5	1	1	3	10
<i>Gu</i>	4	83	35	26	55	203
<i>Lei</i>	—	5	2	1	5	13
<i>Pou</i>	1	5	1	—	5	12
<i>Zun</i>	—	11	6	6	7	30
<i>You</i>	—	5	5	11	9	30
<i>Hu</i>	—	4	—	—	8	12
<i>Zhi</i>	—	3	4	10	8	25
<i>Guang</i>	—	4	—	2	1	7
<i>Fang</i>	—	7	1	1	4	13
<i>Guan</i>	—	2	—	1	—	3
Total						411

(a variety related to *jue* but with two pouring troughs) were essentially identical (Figure 4.9). Such vessel sets could be made from a single model, but the molds used to produce each vessel nonetheless differ in details. Even when a single master model was created, outer molds were finished by hand work that introduced subtle differences. The most extraordinary find of *jue* and *gu* in a single assemblage were the forty *jue* and fifty-three *gu* from tomb 5. Among them, three groups of ten pairs of *jue* and *gu* bore common inscriptions (Si qiao mu, Ya qi, and Su quan). This suggests these groups were gifts to Lady Hao from the lineages named. The prevalence of *jue* and *gu* pairs in multiples would suggest that rites, at least burials, were participatory occasions for which a number of people assembled. Perhaps similar behavior had necessitated the eggshell goblets characteristic of the Shandong Longshan Culture.

While pairs for consuming wine were the common denominator of bronze assemblages, the next most numerous types served different functions. *Ding* tripods are present in assemblages from the Erligang period, and continued into the Western Zhou period and later, by which time

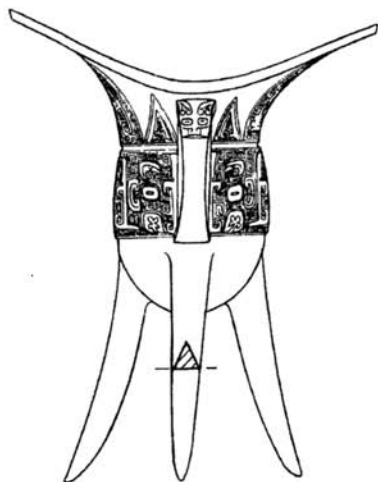


Figure 4.9. Ya zhi *jiao*, tomb 160, Guojiazhuang, Yinxu period III. *Guojiazhuang* (1998), p. 102.

jue and *gu* had disappeared. While represented among ceramics at the Erlitou site, the one bronze *ding* found there may postdate the Erlitou Culture. In later ritual practice, *ding* were used for cooking meat stews and other main courses. This function is borne out in Late Shang by several finds of animal bones within the bowls of *ding*. In tomb 160, “petrified” pork with skin and bone attached was discovered inside a sealed, lidded *ding* vessel.¹¹ By Late Shang, *ding* vessels were made in several variant shapes: as round bowls, rectangular (*fang*) containers, and S-silhouette bowls with either round or flat legs. With 132 specimens in a database of over 840 items, they form a significant part of bronze casting in all Yinxu periods. The twenty-three *li* tripods, sometimes called *li-ding*, might be added to this figure, since their function was probably identical.

In the Upper Erligang period, large *fangding* were deployed in pairs (see Box 9), a custom continued at Yinxu. Examples include two *fangding* in tomb 5 with dedicatory inscriptions to “Mother Xin” (*Si mu xin*), believed to be the posthumous name of Lady Hao, and a pair of *fangding* in M1004 at Xibeigang, attributed to a king of period III (Figure 4.10). Indeed the largest Shang vessel ever recovered is a *fangding* inscribed to “Mother Wu” (*Si mu wu*) from a single-ramp tomb (M260) at the east end of Xibeigang. It is likely this vessel was dedicated to yet another consort of Wu Ding and contemporary of Lady Hao. The size and high quality of these several vessels testify to the status of their makers, namely

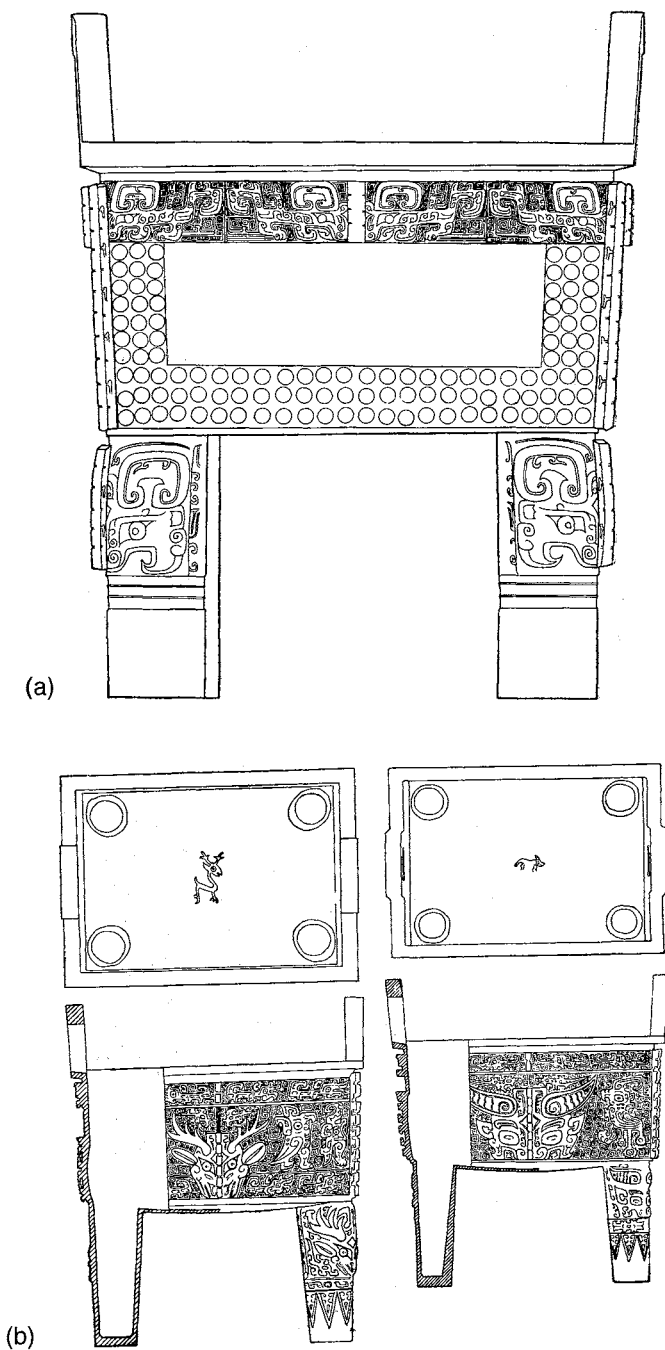


Figure 4.10. *Fangding* vessels, Yinxu periods II-III: (a) Si mu xin *fangding*, tomb 5; (b) M1004 *fangding*. *Yinxu de faxian yu yanjiu* (1994), pp. 277-78.

King Wu Ding or his sons, Zu Geng and Zu Jia. The custom of paired *fangding* did not persist in the Western Zhou period. At some point, Zhou *ding* vessels of consistent design were made in odd-numbered sets (9, 7, 5, 3). This does not seem to be anticipated by Yinxu assemblages. Lady Hao had thirty-two *ding* of many varieties in her tomb; one inscribed “Marshall Bi” (Ya bi) was probably a gift. One variety comprised twelve vessels, all inscribed with her name.

Erligang and Huan-bei period foundries coopted many ceramic shapes. Bowls on ring feet first appear in bronze at Panlongcheng, Hubei in the latter period. However, their presumed function based on later textual records—serving steamed grain—has yet to be documented from residues or contents. Two conventional names designated bowls in Late Shang. *Gui* bowls are the more common, found in hard white pottery, marble, and jade as well as bronze. A *gui* may or may not have handles at opposite positions on the wall or lip of the bowl (Figure 4.11). In period II, *gui* without handles were more common, but by period IV, handles predominate. Somewhat larger and deeper bowls, with or without handles, are named *yu* in inscriptions; some also have lids. These two types account for fifty-three vessels among the Yinxu assemblages. They are prominent in high-rank burials (tomb 5, tomb 160, Xibeigang M1400), but never in great numbers. If the *jue* and *gu* pair was the nucleus of early assemblages, the combination of *ding*, *gui*, *jue*, and *gu* had become the core of most period III and IV ensembles.¹²

The only other type found in significant numbers among Yinxu assemblages is the *jia*, a wine-warming vessel with fifty examples. Like *jue*, this is one of the oldest ritual vessel types in bronze, as at Erlitou (see Figure 1.11). Beginning in the Erligang period, *jia* manifest several variant body shapes: lobed-tripod, skirted, S-silhouette, square, and rectangular. Wine apparently was warmed in *jia* vessels before being distributed. Ladles were necessary to serve the hot liquid, and bronze examples are known from period II on. In tomb 5, the *jia* is one of several types found in some quantity (twelve vessels). Most *jia* made for Fu Hao are exceptionally tall at 60–70 cm, including three specimens in square (*fang*) section (Figure 4.12). Manipulating these large vessels was not easy since they weigh 15–21 kg.

Late Shang bronze vessels can be classified into two large categories: pod base types (428 total) and ring base types (415 total; see Table 4.1). However, when sorted by types, pod bases number only seven, while the ring bases number thirteen. This diversity was not required as a practical matter to accommodate additional functions. Among the pod-base types, *ding* and *li* both served for meat cooking, *xian* (or *yan*) steamed grain, and *he*, *jia*, *jue*, and *jiao* all warmed wine. Among ring base vessels, by contrast, eight types were probably designed for wine storage: *lei*, *pou*,

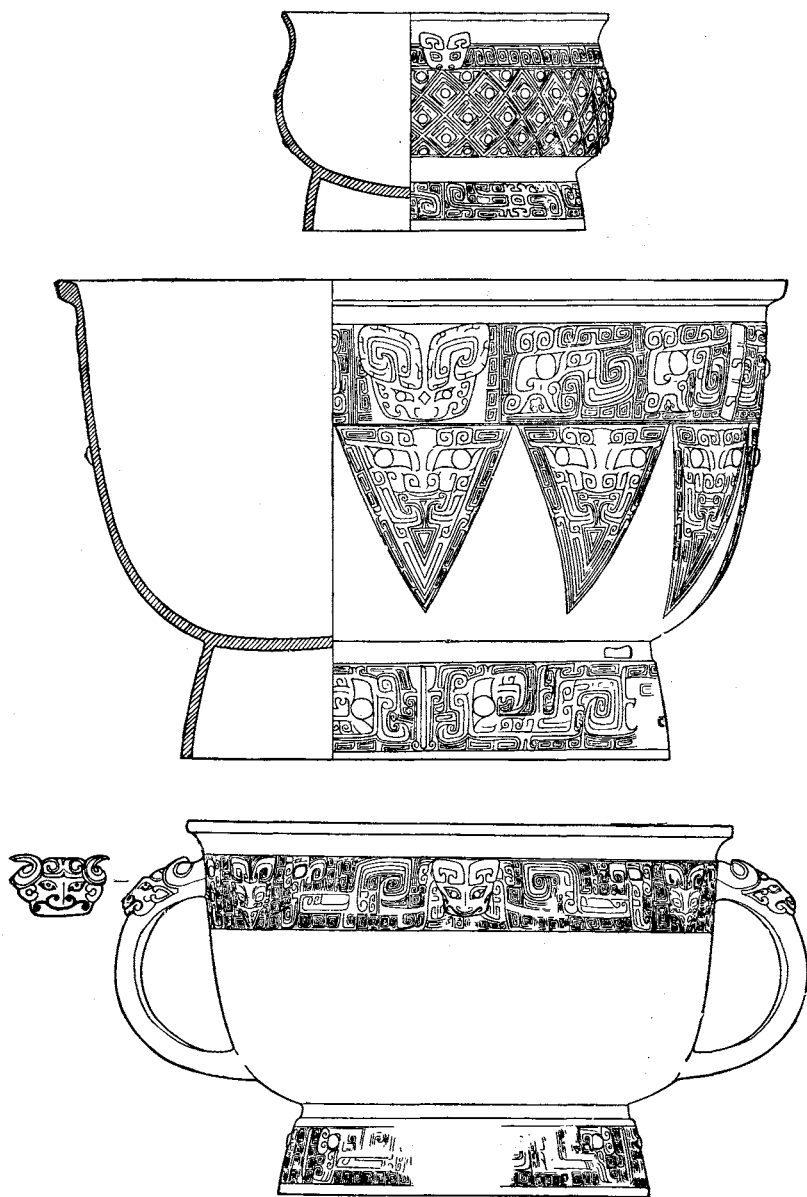


Figure 4.11. Bowls (*gui*, *yu*), tomb 5, Yin Xu period II. *Yin Xu de faxian yu yanjiu* (1994), p. 283.

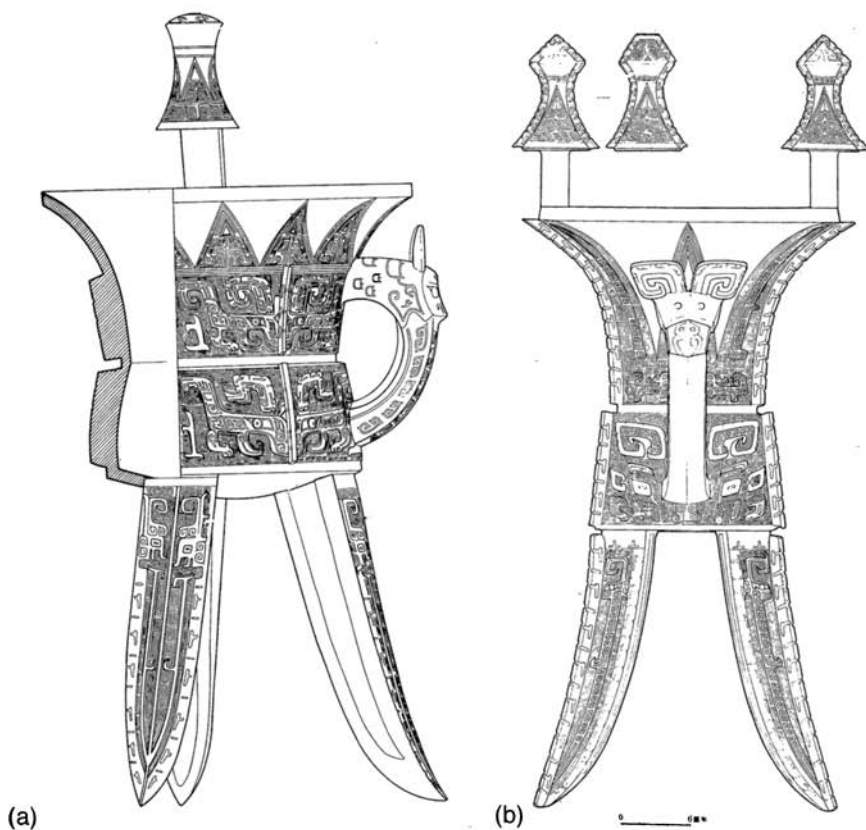


Figure 4.12. *Jia* vessels, tomb 5, Yinxu period II: (a) Si Qiao Mu round *jia*, height 64 cm; (b) Fu Hao *fangjia*, height 68.8 cm. *Yinxu qingtongqi* (1985), figs. 27, 19.

zun, *you*, *hu*, *guang*, *fangyi*, and *guan*. Together these ring base types account for 120 vessels in the database, about equal to the total for all *ding* tripods. Several trends are evident between periods II and IV among the wine storage vessels. First, in period II, several new types appeared, some (like *you*, *guang*, *fangyi*) without obvious prototypes among pottery. Second, wine vessels as a group (combining warming, serving, and storage functions) comprise two-thirds of all Yinxu excavated bronzes. Traditional criticism of the Shang kings as rulers who debauched and consumed enormous quantities of wine would seem to have some support from the artifactual record. Third, over time, certain wine vessels common in period II declined or altogether disappeared, presumably as other types took over their roles or as the rites themselves changed. For

example, *pou* wine containers, which appear from the Huan-bei period through Yinxu period II, had disappeared by period IV, probably displaced by *you*. The cylindrical *you* of period II, on the other hand, was replaced by an oval variety in period IV. A cylindrical variety of *zun* replaced earlier shouldered varieties (*zun* or *lei*) by period IV. The new varieties of *you* and *zun* that dominated period IV continue to be prominent into the Western Zhou period.

Late Shang foundries experimented with two new ways of rendering bronze vessels. (1) Several types in square (*fang*) cross-section were a major preoccupation of the (royal?) foundry serving Lady Hao in period II. Square-section vessels in her tomb include *ding*, *jia*, *lei*, *zun*, *hu*, and *fangyi* types. With the exception of *ding*, none of these types is documented in square-section varieties prior to period II. In tomb 160, the richest burial from period III, a similar but smaller array of types is represented: *ding*, *jia*, *gu*, and *zun* (Figure 4.13). While examples of *fang*-vessels are sometimes found in modest burials, most *fangding* and other *fang*-vessels are associated with high status. (2) Less common are vessels in the shape of birds and animals. Again, tomb 5 supplies examples, pairs of owl-shaped *zun* and ram-shaped *guang*. The appearance of real animals and birds in Shang crafts is part of broad trends in decoration discussed below; their possible meanings also deserve reflection. When unprovenanced vessels in collections are added to excavated ones, it appears that periods II and III at Yinxu saw production of a considerable number of these innovative renderings. This trend continued beyond the Late Shang period in Western Zhou foundries.

Decoration

The crafts encountered among Anyang excavations share both motifs and style. The evidence is almost all durable materials, like fired clay (see Figure 3.15), carved bone or ivory (see Figure 3.16), and stone (see Figures 3.17–18), in addition to bronze. Perishable media, including wood, lacquer, textiles, basketry, and plastered walls, only rarely survive. When they do, as with a fragment of wall at Xiaotun or fossil impressions of carved, inlaid, and lacquered wood in a Xibeigang tomb, they too bear decoration like that in durable media. From these twin observations, therefore, we know “Late Shang style” was employed across media and for varied functions. If we did not have elite burials, little evidence for most of these crafts would be available. What we designate as Late Shang style may have functioned as an explicit sign of elite status, perhaps because of the labor and skill invested in these objects.

A variety of skilled artisans created this decorative style. On the whole, it seems to be an art determined by the process of carving. Many designs

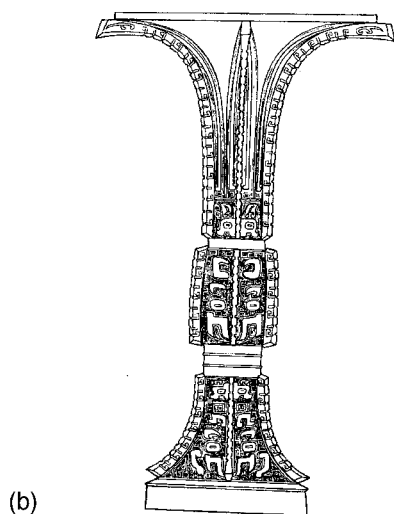
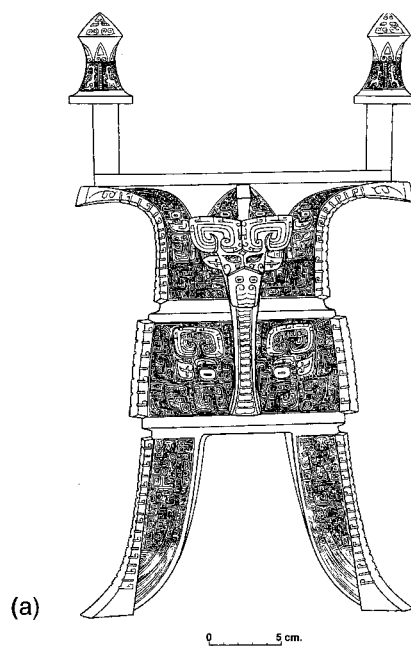


Figure 4.13. Square-section vessels, tomb 160, Guojiazhuang, period III: (a) *fangjia*, height 43.4 cm; (b) *fanggu*, height 30 cm. *Guojiazhuang* (1998), pp. 96, 100.

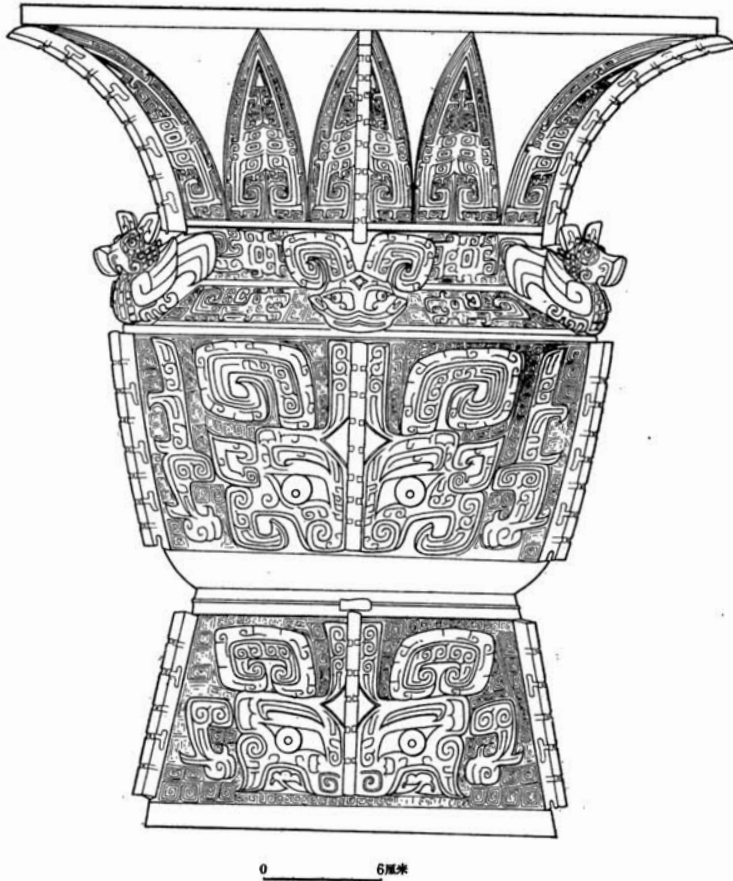


Figure 4.14. Fu Hao *fangzun*, tomb 5, Yinxu period II, height 43 cm. *Yinxu qingtongqi* (1985), fig. 13.

and motifs show traits of working in a medium with a blade (white pottery, bone, stone, clay for casting molds). Decoration was generally part of the surface, rather than being applied to it, whether so-called intaglio (*yin wen*) or relief (*yang wen*). In the late Erligang and Huan-bei periods, decoration on bronze vessels in particular had spread over surfaces, having previously been confined to narrow bands. It was commonplace by period II to create registers of decoration on several segments of a vessel, for example ring foot, body, shoulder, and neck (Figure 4.14). Decoration sometimes filled an entire segment, and superimposed registers were aligned on a common axis on each face of the vessel, whether

repeating motifs or employing different ones. These efforts created an implicit distinction between the least ornamented things and those more decorated. They established levels of quality and visual interest in direct relation to the expenditure of energy required to prepare molds, just as scale and the quantity of alloy also testified to cost.

This trend began in the Huan-bei period preceding the appearance of oracle-bone inscriptions at Xiaotun. Such vessels and their counterparts at sites like Taixi, Panlongcheng, and Zhengzhou, exhibit dense patterns crowding around the core elements of a motif. Eyes and mouth are fairly obvious, but the quills and squared spirals that fill in each register obscure other features (Figure 4.15). By contrast, vessels from tomb 5 (period II) represent the first large quantity of vessels with clearly readable motifs played off against the surrounding surface. The new approach had two technical solutions, but one common goal. Clarity was achieved either by graphic renderings or by relief. In both cases, the effect was to emphasize major motifs by making them distinct from the surrounding ground. For example, elements of the main motif were less embellished as compared to the density of the ground (Figure 4.16a) and/or were raised in relief against it (Figure 4.16b). Vessels made for Lady Hao carry both treatments. Someone chose in particular instances to decorate some vessels with a graphic rendering and others using relief. The largest, most imposing vessels made for Lady Hao generally favor relief.

With the discovery of tomb 5 and its attribution to Lady Hao (see Box 14), we have become better informed about bronze casting for royal patrons in Yinxu period II. However, the two treatments of decoration mentioned above were only part of that story. Equally decisive was the creation of new motifs used for bronzes as well as other media. The ill-defined, even incomplete “mask” and “dragon” motifs of Erligang period decoration were given careful definition. Creatures from the real world, or parts of their anatomy, make their appearance on bronze vessels. More rarely, humans, especially faces, also come into play. Geometric patterns also cover some vessels, sometimes in their entirety, sometimes complementing other motifs. By Yinxu period II, then, bronze decoration had been reinvigorated. One wonders if this was simply the result of continually updating ritual equipment at well-patronized foundries, or if it also had connections to developments in cult ideology or practices.

In Yinxu periods III and IV, our understanding of bronze decoration and indeed other media is constrained by the relative dearth of rich burials. For period II, 27 assemblages yielded some 315 vessels, while 44 assemblages for period III have produced only 138 items. For period IV, 47 assemblages contained 172 vessels. Since about 200 period II vessels emanated from tomb 5 alone, the period III and IV samples are obviously

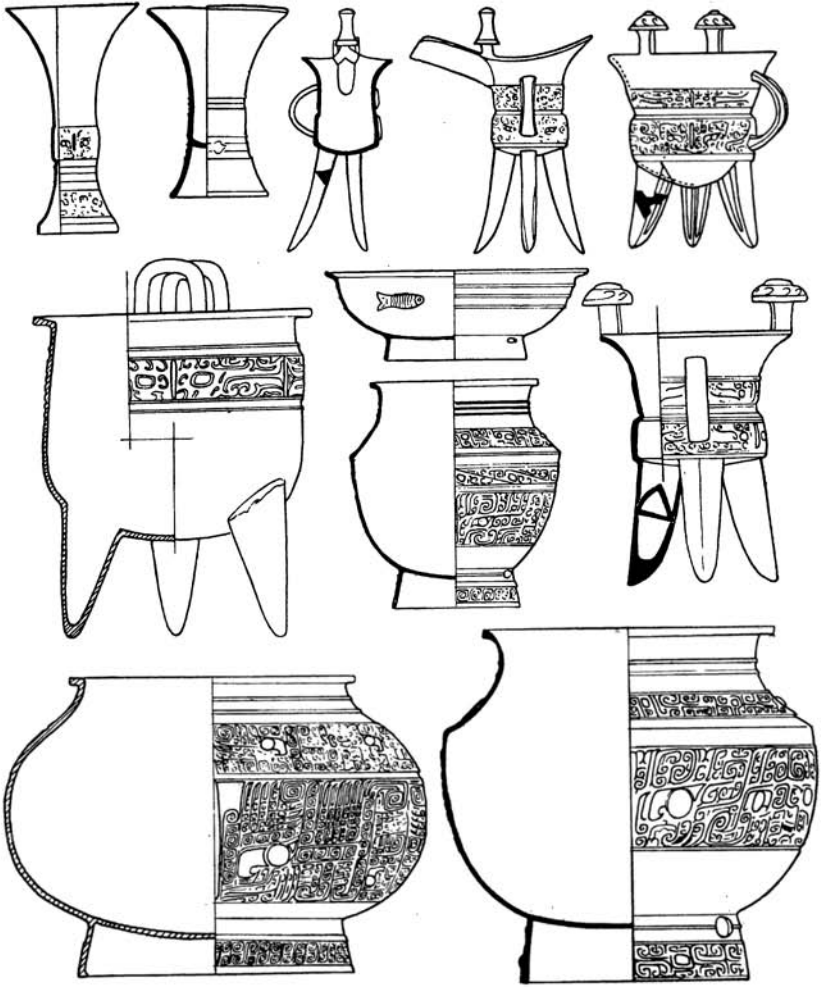


Figure 4.15. YM232 assemblage, Yinxu period I. *Yinxu qingtongqi* (1985), p. 42.

not comparable. On the other hand, even in this sample dominated by lower-ranking burials with small assemblages, there is no great difference in the range of types and varieties between periods II and III. By period IV, however, we tabulate about a dozen fewer types and varieties than in period II. This reduced range may be more an attribute of the sample than a true characteristic of the whole industry. A few rich burials could easily change these numbers and hence our sense of trends, as suggested by tomb 160 at Guojiazhuang. Among pod base types, *he*

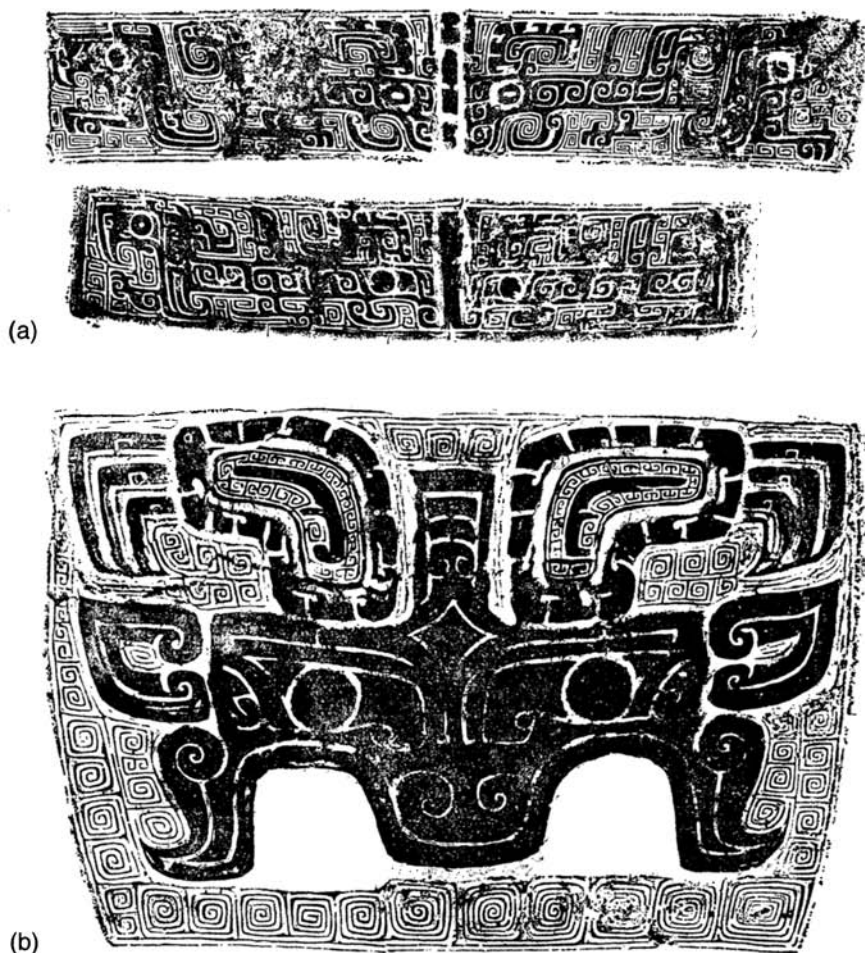


Figure 4.16. Mask motifs, tomb 5, Yinxu period II: (a) graphic rendering; (b) relief rendering. *Yinxu Fu Hao mu* (1980), pp. 27 and 23.

spouted pouring vessels and *jia* wine warmers declined. Among ring base types, no *yu*, *pou*, *hu*, or *zun* are found among datable assemblages, and *pan* and *lei* are less common. On the other hand, *gui* with handles, cylindrical *zun*, oval *you*, and *zhi* are now ubiquitous, complementing the perennial *ding*, *gu*, and *jue*.

There are also visible changes in decoration in periods III and IV. A high percentage of vessels still carry the frontal masks and profile birds and dragons that became common in period II. On the other hand,

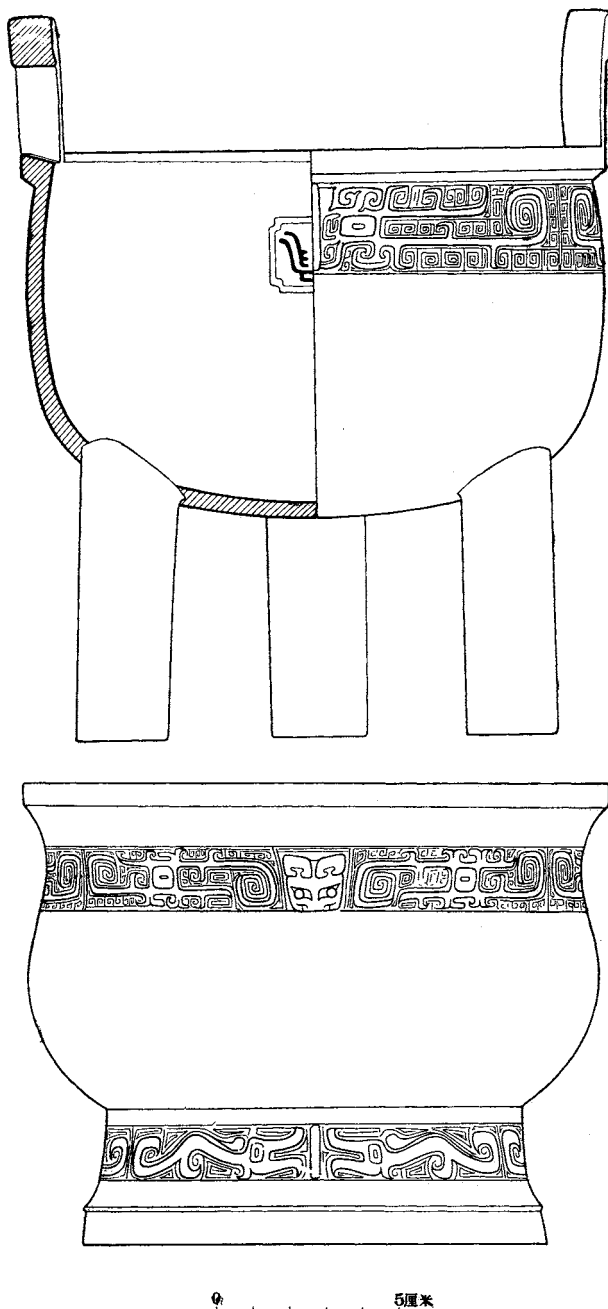


Figure 4.17. Band decoration, tomb 172, Miaopu North, Yinxu period III.
Yinxu qingtongqi (1985), fig. 66.

band decoration and “bow strings” are prominent, especially on *ding*, *gui*, *jue*, *zun*, *you*, and *zhi*. Bands fill only a portion of a body segment (bowl, ring foot, or neck) in contrast to the full surface decoration of period II (Figure 4.17). Bands may feature graphic or relief versions of profile birds, dragons, or other motifs like cicadas, often with whorls and petals. Many *ding* and *gui* have a lattice pattern with bosses covering their bodies, or bands featuring dragons or birds with lappets below, perhaps cicadas. These features noted in periods III–IV can also be found among vessels from tomb 5, but only in small numbers. It is tempting to view the mask motifs and *fang*-section shapes as associated specifically with the royal lineage and its cult. Other trends noted here, by contrast, seem to have been shared more widely among lineages.

Inscriptions and Social Relations

On present evidence, the reign of Wu Ding (c. 1250–1192 B.C.E.) witnessed the appearance of oracle-bone inscriptions in the artifactual record, the proper beginnings of writing in East Asia. Inscriptions also begin to appear on bronze vessels, bells, and weapons. The Shang royal lineage must have been literate to some degree, a literacy shared with some other elite groups who also both practiced divination and inscribed vessels. While few burials at Yinxu actually contain bronze vessels (about 4 percent of datable assemblages in my database), a high percentage (70+ percent) of those vessels are in fact inscribed. Inscriptions first appear among excavated vessels at Anyang with a solitary *he* pouring vessel from foundation 54, Locus North (Figure 4.18).¹³ Its text has been interpreted as a dedication by Wu Ding to his own father, Fu Yi (Xiao Yi). The vessel is dated to period I. Inscriptions were plentiful among objects in Lady Hao’s tomb, and remain commonplace until the end of the Yinxu occupation. During this same time inscribed vessels are documented over a wide area of North and Northwest China.

Among those excavated Anyang bronze vessels that can be dated by the Work Team are over one hundred distinct inscription texts, almost all on objects retrieved from burials. The majority are single graphs generally interpreted as the names of lineages (see Figure 3.13). While they cannot be read as meaningful texts, they do shed light on Late Shang society. Most of these clan insignia or emblems (*zu hui*) are solitary instances of that graph found on a single vessel. This does not make the emblems unique, however. Other examples are generally known, either from objects without secure provenance or from excavations outside of Anyang. When emblems occur both at Anyang and at sites removed from the great settlement, distribution of lineages across the North China plain and elsewhere can sometimes be inferred.

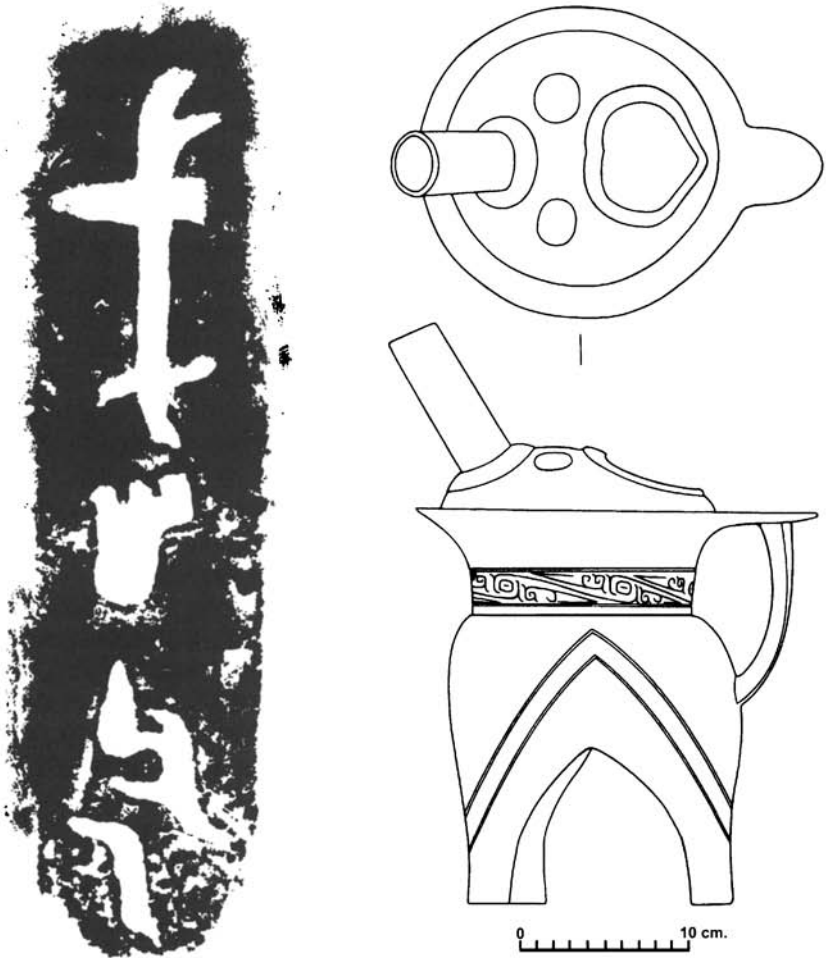


Figure 4.18. Wu Fu Yi *he* and inscription, foundation no. 54 (D Group), Xiaotun Locus East, Yinxu period I, height 34 cm. *Kaogu* 2001.5:25.

Less common than clan emblems are inscriptions that incorporate terms indicative of rank, such as *zi* (prince), *fu* (consort, lady), or *ya* (marshall, commander). These terms, also known from oracle-bone inscriptions, are generally combined with the emblem of a lineage. Since lineage names are corporate, we generally need other circumstantial data to pin down which man or woman of a certain period and lineage was the maker or owner of the vessel in question. A powerful, long-lasting lineage might produce a number of individuals who attained the

TABLE 4.2. Attributed Burials at Yinxu

<i>Yinxu period II</i>	
M5, Xiaotun North	<i>Fu Hao</i> (109 items)
M663, Dasikongcun	<i>Gu</i> (lineage, 4 items)
M26, Guojiazhuang	X (lineage, 4 items)
M54, Huayuanzhuang	<i>Chang</i> (lineage, 10+ items)
<i>Yinxu period III</i>	
M172, Miaopu North	<i>Ya Yu</i> (5 items)
M269, Qijiazhuang	<i>Yuan</i> (lineage, 25 items)
M160, Guojiazhuang	<i>Ya Zhi</i> (33 items)
M907, West Zone	<i>Gong</i> (lineage, 3 items)
<i>Yinxu period IV</i>	
M1, Xiaotun South	Y (lineage, 6 items)
M1713, West Zones	<i>Ya/Fu Yu</i> (4 items)
M1046, Liujiuazhuang North	<i>Ya Ji Beng??</i> (24 items)

Sources: M5: *Yinxu Fu Hao mu* (1980); M663: *KG* 1988.10; M26: *KG* 1998.10; M54: *KG* 2004.1; M172: *Yinxu qingtongqi* (1985); M269: *KX* 1991.3; M160: *Guojiazhuang* (1998); M907: *KX* 1979.1; M1: *Yinxu qingtongqi* (1985); M1713: *KG* 1986.8; M1046: *KJ* #15.

status indicated. Inscriptions with rank terms are generally assumed to name living persons rather than deceased ancestors. I presume they designate the person who caused the object to be made. This same person would then use the vessel on his or her altars. When a majority of vessels in a single burial bear common inscriptions, we are emboldened to attribute that burial according to their content. At least eleven assemblages at Yinxu can be attributed to specific persons or lineages on this basis (Table 4.2).

However, burial assemblages often contain several different inscription texts. This may lead to debate about whom the burial should be attributed to. Most often, the mix of inscriptions would seem to be evidence for exchange between lineages. Vessels might have been given at marriages or perhaps at ceremonies conferring rank or bestowing gifts. In addition, if vessels from altars were culled selectively to create burial sets, a mixed assortment might then be sent to a grave. And if funerals were occasions for relations and peers to gather, one can equally well imagine donated vessels and their contents buried together.

The current sample of dated vessels has at least a dozen inscriptions in common between the royal cemetery at Xibeigang and other, elite cemeteries. We might infer therefore that these lineages participated in royal funerals, perhaps by contributing vessels, offerings, even persons (victims, servants), to the royal rites. If establishing a lineage cemetery near the Yinxu cult center was dependent upon service to the king or royal family, participation might have been an obligation for the nonroyal



Figure 4.19. Inscriptions, tomb 1713, West Zones, Yinxu period IV. *Kaogu* 1986.8:708. The simplest of these inscriptions (no. 4) reads Ya Yu ("Marshall Yu"), while two others (nos. 5, 6) add a dedication to "Father Ding." Three narrative texts mention a royal gift of cowries in the king's seventh sacrificial cycle (year), for either "Brother Gui" (no. 2) or "Father Ding" (nos. 1, 3).

lineages. Likewise, we have twenty-nine instances in the database of identical inscriptions found in multiple burials crossing space or time (see Figure 3.13). Specific plots or clusters of graves might be identifiable, therefore, as those of particular lineages and their relations.

Very few vessels excavated at Anyang carry more complex inscriptions that are readable as texts, although several dozen more Late Shang examples are known from catalogs. The excavated vessels all date to period IV, the reigns of the last two kings, Di Yi and Di Xin (1101–1046 B.C.E. by the official chronology). In tomb 1713 in the West Zones, one inscription narrates a gift of cowries from an unnamed king to make a sacrificial vessel for a Brother Gui. The date is given as the king's seventh sacrificial cycle (*si*; Figure 4.19). Two other inscriptions in this same tomb do not specify the king, and instead note a gift of cowries to make a vessel for a Father Ding. These vessels bear a clan sign, *Yu*, and the rank terms *fu* or *ya*. In yet another case, a large round *ding* from the sacrificial pit at Hougang mentions a gift of twenty strings of cowries to one Shu Si Zi (Figure 4.20). At thirty graphs, this is the longest inscription

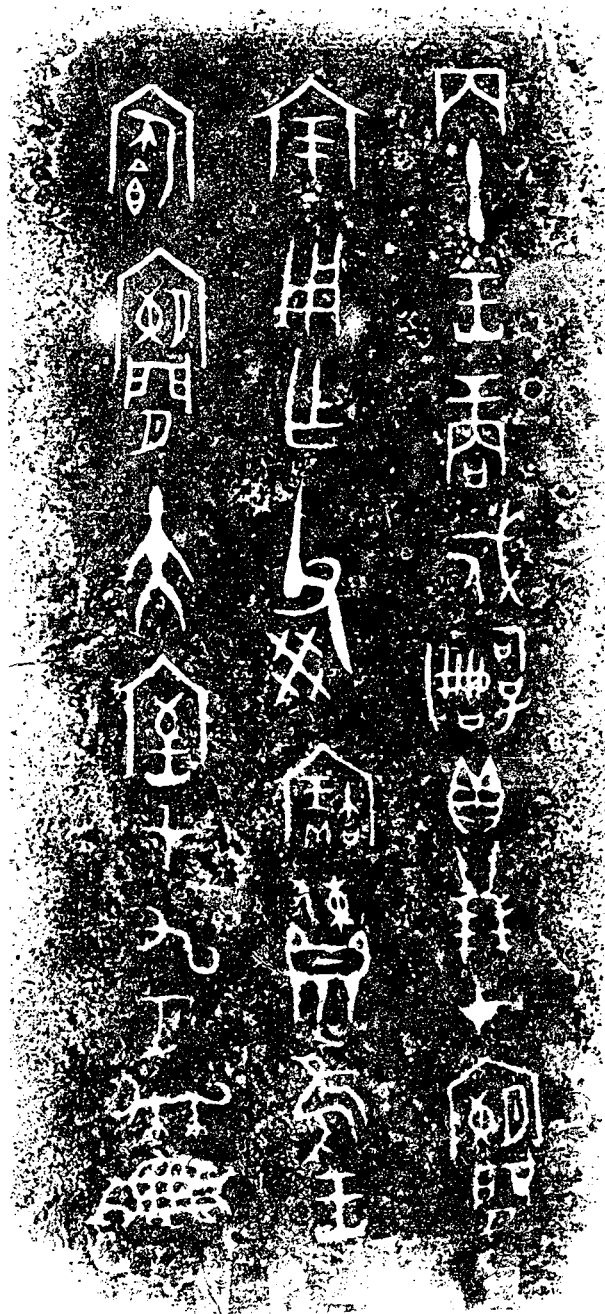


Figure 4.20. Shu Si Zi *dìng* inscription, Hougang, Yin Xu period IV. *Yin Xu fajue baogao* (1987), p. 272. The inscription reads: “On the day *bingwu*, the king awarded [me], Shu Si Zi, twenty strings of cowries at the X Temple, which I then used to make this precious *dìng* tripod for [my deceased] father Gui. It was when the king held the X-sacrifice in the Great Hall at the temple in the ninth month.”

scientifically excavated at Anyang. While the text is not dated to a specific sacrificial cycle, it does specify the king's location and the ninth moon.

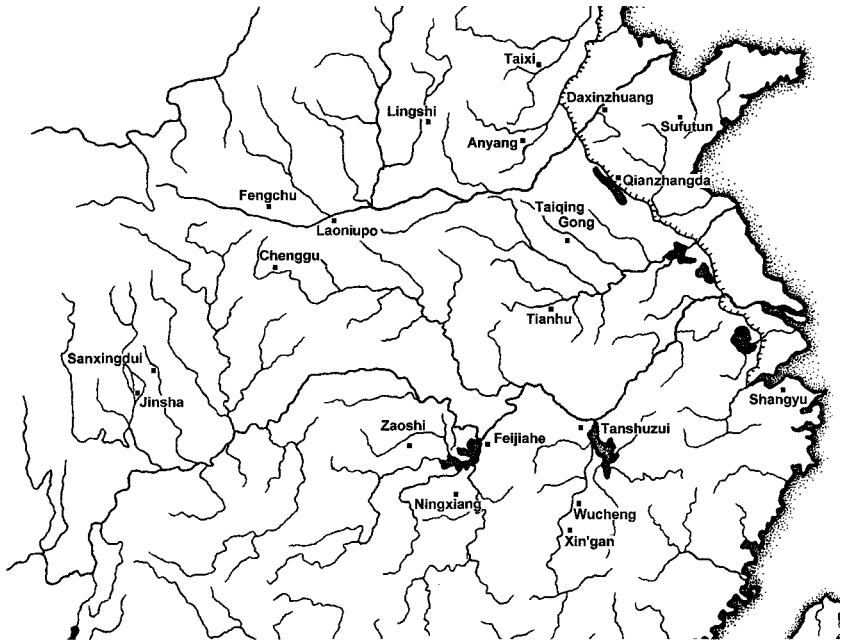
Inscriptional data from Yinxu document a ceremonial center for the Shang kings that also served other, elite lineages. Their burial tracts surrounded the royal temples, sacrificial tracts, and tombs of Xiaotun Locus North and Xibeigang. While craft industries supplied the royal family, they also served the ritual needs of these elite groups. Relations between the royal family and this elite were inherently unequal. Nonetheless, some rites and beliefs were apparently held in common, and some reciprocal obligations existed. Among themselves, the elite seemingly interacted in a variety of ways as peers. Moreover, some of these elite lineages were also established at settlements outside the Anyang region. That aspect of Late Shang state and society is explored further in Chapter 5.

Chapter 5

The Late Shang World (c. 1300–1050 B.C.E.)

In rediscovering the Shang kings and their civilization, archaeologists and historians have created an “Anyang-centered” view of the late second millennium B.C.E. Contemporary cultures have generally been judged against the archaeological record at Anyang. They are classified as more or less advanced, even civilized, by the degree to which they manifest the traits of Yinxu: for example, impressive buildings and tombs, bronze ritual vessels and weaponry, sophisticated crafts more generally, and not least, writing. Since some historical traditions were verified at Anyang, these same sources are also assumed to contain kernels of truth about contemporary regional cultures. Thus these archaeological cultures are believed, sometimes arbitrarily, to correspond to groups of people named in the received literary tradition.

Objections to viewing the late second millennium B.C.E. in this way fall into several categories (Map 7). While it is true that even today, Anyang remains the only major settlement that can readily claim status as a state capital, other promising settlements and site clusters are gradually becoming known. Some regions now present evidence of sophisticated material cultures, if not all of those components associated with Yinxu. Large walled sites (like Sanxingdui, Sichuan), sophisticated temple-palace structures (like Qishan, Shaanxi), and ambitious graves (Tianhu and Taiping Gong, in Henan, and Sufutun and Qianzhangda, in Shandong) have been found in several macroregions. Exploitation of bronze was also pursued with vigor in several areas: Zhouyuan (Shaanxi), Sanxingdui (Sichuan), and Ningxiang (Hunan). And while Anyang still offers the only extensive evidence for writing as well as the cult practices and state organization that required it, traces of writing are now documented elsewhere in the archaeological record (Zhouyuan, Daxinzhuang, Wucheng).



Map 7. Sites contemporary with Anyang, ordered by province, with site name and county or city; (1) Henan: Taiqing Gong, Luyi; Tianhu, Luoshan; (2) Shandong: Daxinzhuang, Jinan; Sufutun, Qingzhou; Qianzhangda, Tengxian; (3) Hebei: Taixi, Gaocheng; (4) Shanxi: Jingjie, Lingshi; (5) Shaanxi: Laoniupo, Xi'an; Fengchu, Qishan; Baoshan, Chenggu. (6) Sichuan: Sanxingdui, Guanghan; Jinsha and Shi'erqiao, Chengdu. (7) Hunan: Zaoshi, Shimen; Ningxiang; Feijiahe, Yueyang. (8) Jiangxi: Tanshuzui, Tongling; Wucheng, Zhangshu; Dayangzhou, Xin'gan. (9) Zhejiang: Lijiashan, Shangyu.

The View from Yinxu

The view from Yinxu was clearly restricted and did not extend for great distances equally in all directions. The Shang kings were most concerned about their own lands (*wang ji*) and the bordering territories (*si tu*).¹ Reports of hostile incursions on these flanks and inquiries about their harvests are common among oracle-bone inscriptions. A variety of persons are named: various archer lords (*hou*) and marshalls (*ya*), allies of the kings, and various chiefs or lords (*bo*) of (often hostile) statelets (*fang*). The Shang king would sometimes visit these groups on a hunt or peregrination, or join with them in a military campaign. During the Late Shang period (a minimum of 150 years, but perhaps as much as

250 years), some allies became enemies, and vice versa. Some groups probably shifted their locations. For example, the Zhou may have moved from the Fen River valley (Shanxi) to the Wei River valley (Shaanxi), and Shu may have moved from Shaanxi south into Sichuan. Marauding peoples across the north (Gui-fang, Tu-fang, Ba-fang) are especially prominent in Wu Ding period inscriptions, while a group in the east (Ren-fang) is notable in the last reigns. Military relationships with frontier statelets seem to be verified by a smattering of archaeological finds in Hebei, Shanxi, and Shaanxi. Here burials feature weapon kits that are a mix of Shang weapon types like *ge* and *yue*, and other types associated with the steppe (the so-called Northern Zone). The impact of northern people's weaponry on the Shang cannot be doubted, for example daggers, socketed axes, and most of all, the horse-drawn chariot. It is sometimes possible to match peoples named in oracle-bone inscriptions and the emblems found on bronze vessels and weapons with archaeological loci in the North and Northwest macroregions (see Box 18). More distant peoples in Jiangxi, Hunan, or Sichuan, however, are less visible in the oracle-bone inscriptions. Although received texts name inhabitants of these regions (the Huai Yi, Bai Yue, or Shu), from Yinxu they are at best shadowy presences at the edge of the Shang world. Nonetheless, some of southern material culture was known to the Shang people of Anyang and indeed elsewhere.

In fact, one of the most striking aspects of the Late Shang period is the manifold ways in which many peoples and cultures were interconnected. Copper ores were smelted in the south (Jiangxi) and transported to foundries in the North, Northwest, and Upper Yangzi. Vessels and weapons circulated, although different regions adopted or adapted them selectively according, we assume, to their own needs. Thus such standard containers as *lei* and *zun*, known from Erligang and Huan-bei period sites across a very wide area, became the special products of foundries in the Middle Yangzi (Hubei and Hunan; see Figure 5.12). They were sent in turn up and down the Yangzi River, and into the Wei River valley as well. Clays, processed into vessels, also traveled, especially hard pottery and so-called protoporcelains (see Figures 5.13–14). Their origins in the south—Hunan, Jiangxi, Zhejiang—are increasingly well documented. Their distribution during the Late Shang and early Western Zhou periods incorporates most major North and Northwestern sites. Stone, especially nephritic minerals (jades), also traveled great distances. Nephrites found at Anyang and Xin'gan are from Xinjiang, and must have been exchanged with peoples along a corridor coming into either the Northwest or Upper Yangzi macroregions before further dissemination in China Proper. Turquoise from Hubei and lacquer from the Yangzi drainage also traveled in several directions.

For their part, the Shang people themselves distributed their material culture, either by directly transferring things when a colony moved into a region, or by gifting and trading objects with neighbors. This process began in the Erligang and Huan-bei periods, when colonies established in new territories taught local peoples how to build with pounded earth or to cast bronze tools, weapons, and vessels (see Chapter 2). Although the extent of effective royal power likely diminished during the Late Shang period, a network of gift and exchange relations still tied neighbors near and far to Anyang. Vessels and weapons, often inscribed, were sent out from the ceremonial center, some to end up in the tombs of local chiefs. Neighbors, for their part, sent not only tribute of tortoise shells and cowries, but also weapons, horses, and associated items. Because of the diffusion of so many things in all directions, we can properly call the several macroregions discussed below “the Late Shang world.”

Near Neighbors: The North China Plain

With an approximate area of thirty square km and the largest population in North China, the Shang ceremonial center near modern Anyang must have exerted a considerable centripetal pull on surrounding peoples and resources. This “great settlement,” where the living kings practiced rites of divination and sacrifice, was also and equally an extensive necropolis for the royal lineage and associated clans, as well as a craft-producing center. Prolific foundries produced the tools, weapons, and ritual vessels needed by elites and conferred as precious gifts by the kings. Other resources accumulated there as well, to be processed or distributed. The fields and villages within a few days journey in all directions must have been the bread basket for the population resident at Anyang. This same surrounding rural landscape saw the comings and goings of the king, his many officers and dependents, and local lords with attendants who came to see the king. Files of humans (and animals?) carrying ingots from the mines of the south, or pots, hardstones, or lacquer also passed through these outlying districts on their way to “Shang.” This was the center of the world as viewed from Anyang, the royal domain (*wang ji*), a geography of familiar landmarks and docile villagers.

North and east from the great settlement stretched the broad alluvial loess plains of the Huang River. This was level, low-lying terrain stretching from the Taihang foothills northwest of Anyang to the sea coast, incorporating most of modern Hebei, Henan, and Shandong provinces. In the northeast, near modern Beijing and Tianjin, a shallow bay (Bohai) filled the low coastal shelf, while rugged rocky mountains (the Yanshan) running east-west screened the plains from the north. The Huang

flowed in Late Shang times more north than east, skirting the Taihang foothills before reaching the coast near Tianjin. East from Anyang, the Taishan massif, once an island, had long ago been encircled by alluvium. Southeast of Anyang, the North China Plain changed to low hills that delineate the ostensible boundary between the Huang and Huai River drainages. Cold winters and hot summers permitted dry-field farming of millets and sorghums in most of this area. Forested hills flanking the plains supplied timber. Hunting, a favored royal pursuit, must have taken advantage of both uncultivated plains and forested slopes.

We should probably assume continuing occupations of some Huan-bei period sites identified earlier. The great walled settlement at modern Zhengzhou and the satellite community at Xiaoshuangqiao had resident populations in the Late Shang period, even if the king was no longer there. Smaller communities like Mengzhuang (Zhecheng, eastern Henan), or the walled outpost at Fucheng (near Jiaozuo, northern Henan) also survived. Near Jinan, Shandong, on the western flank of Taishan, a medium-sized settlement at Daxinzhuang supported a population in all respects indistinguishable archaeologically from the Shang people of Henan.² Likewise, in Hebei, small communities stretched north from Xingtai to Gaocheng.

But Late Shang period habitation sites are not especially common on archaeologists' maps of this region. Where survey has been pursued intensively, settlements tend to reveal very long occupations, both predating and postdating Late Shang. Such is the evidence of several dozen preliminary excavations in Shandong. Persistent occupation destroys traces of earlier periods, as have many activities of the later rural communities who leveled the fields, worked the land, and dug clay for bricks. More lasting, and better preserved, are underground features, mainly cemeteries. Many finds of bronzes or of graves testify to nearby communities whose traces are either still unrecognized or long ago were lost.

Only a few major finds of the Late Shang period can be discussed for this region. Given a plethora of places and people named in the oracle-bone inscriptions associated with the east (*dong tu*), as well as the considerable number of clan emblems also known, the total number of sites is still small.³ North of the Huai River in southern Henan, a cemetery of the Late Shang period at Tianhu, east of Xinyang, held traces of a lineage called Xi (Figure 5.1).⁴ Not far northeast, again on the border of Henan and Anhui, a similar burial site at Taiqing Gong, Luyi, confirms the presence of a Chang clan.⁵ Equally distant from Anyang in modern Shandong, are cemeteries of the Ya Chou lineage (Sufutun, Qingzhou; Figure 5.2) and a Shi lineage (Qianzhangda, Tengzhou).⁶ None of these cemeteries at present is matched by good evidence for nearby settlements that must have existed in the same area. All show hierarchical patterning, with a few richly furnished graves amid other more modest

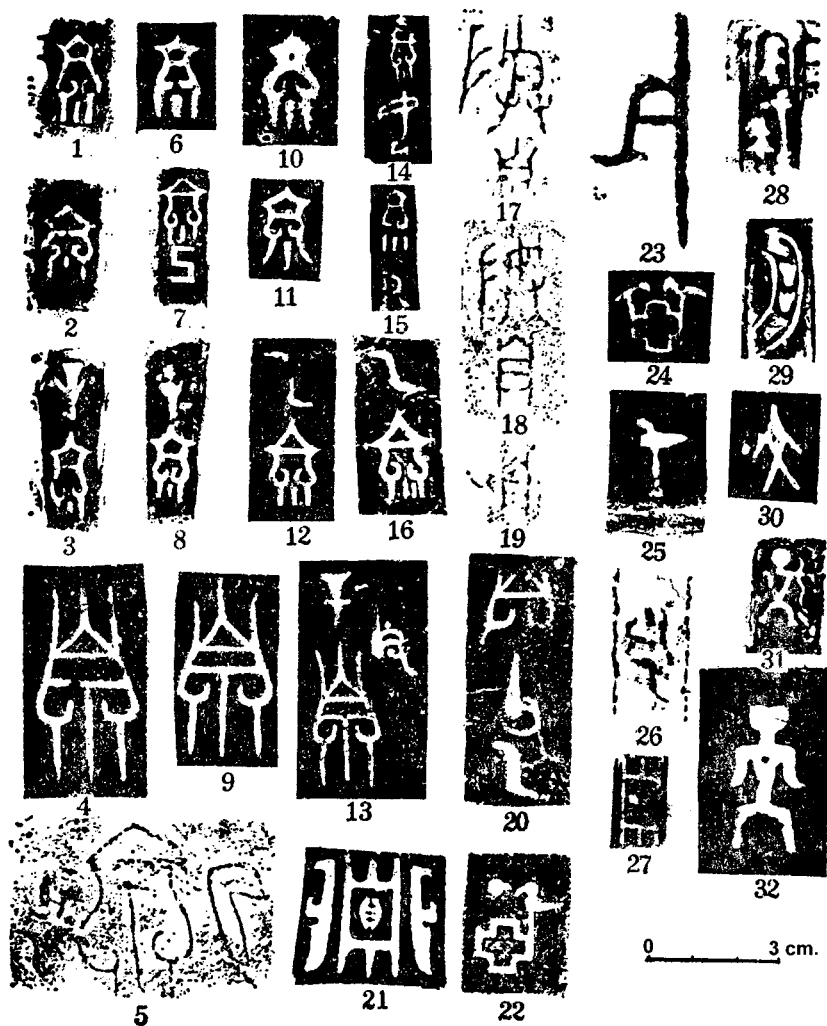


Figure 5.1. Late Shang clan emblems: Tianhu, Luoshan, Xinyang, Henan. *Kaogu xuebao* 1986.2:173. The Tianhu cemetery was occupied by members of the Xi lineage (rubbings 1-21), a name found in Yinxu oracle-bone inscriptions in connection with a consort of Wu Ding. The twenty-two Shang graves and their contents are dated from Yinxu periods II-IV.

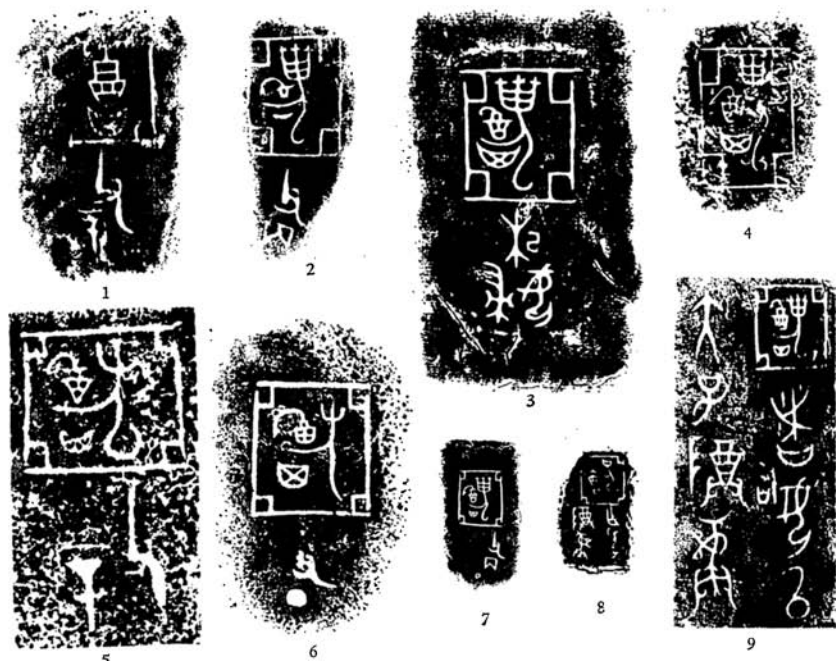
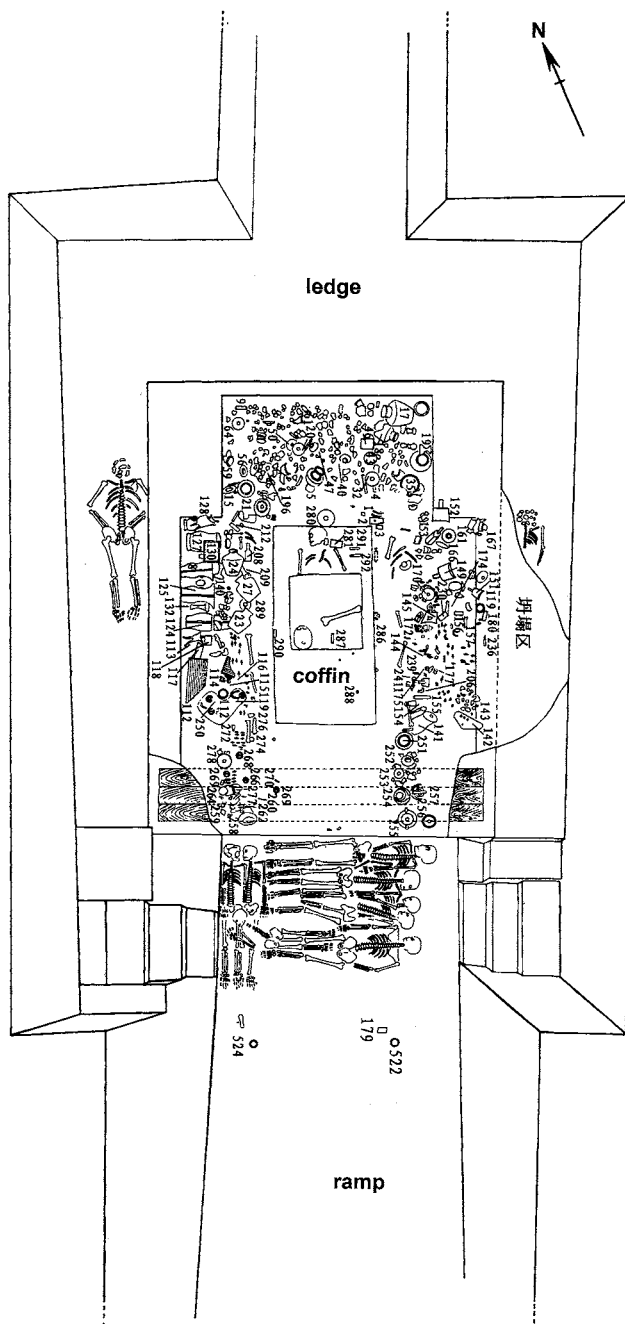


Figure 5.2. Late Shang clan emblems, Ya Chou. *Kaogu xuebao* 1977.2:24. The clan emblems illustrated here were recorded in an early twentieth-century compilation; they do not come from excavated objects. Within their similar square frames (read as “Ya”) these examples exhibit several different renderings read as “Chou.” Short ancestor dedications are placed below the frames, for example, to “Father Xin” (nos. 1, 5) and “Father Bing” (nos. 2, 7).

ones. At Sufutun, Qianzhangda, and Taiqing Gong are large tombs with two or even four ramps, much like the royal tombs of Xibeigang, complete with human victims sacrificed at the funerals (Figure 5.3). Handsome inscribed bronze ritual vessels suggest that a portion of their ritual gear actually came from Anyang. Since all of these sites flourished during the last reigns of Late Shang, they could be physical traces of local

Figure 5.3. Tomb at Taiqing Gong, Luyi, Henan. *Kaogu* 2000.9:10. This large tomb with two ramps was aligned north-south. Eight victims were laid out at the point where the south approach ramp meets the burial chamber. Two other sacrificial victims were found on the east and west ledges, while several more were found in the chamber itself or in the waist pit under the lord, a sixty-year-old male, interred in the coffin. A dog was also placed in the waist pit. Grave furnishings occupy almost all the space between the coffin and chamber walls.



lords who allied with the Shang kings in campaigns against the Ren-fang during the reigns of Di Yi and Di Xin.

Archaeologists in Shandong and Hebei believe their provinces experienced the gradual impact of Shang culture on local cultures. In this model, the great settlement decisively affected developments in western Shandong and southern Hebei. But at a further remove, on the coast of Shandong and in northern Hebei, on the other hand, distinct local cultures are recognized in the artifactual record. The Zhenzhumen Culture of the Shandong peninsula and its coastal islands has affinities with the Liaodong peninsula across the Bohai. Sites south and north of the Yanshan range (such as the Xiajiadian Culture; see Chapter 1) are part of the "Northern Zone," as characterized by their weapons. It is difficult to draw any firm line around the area occupied by the Shang people. But at a certain distance from Anyang, traces of the Shang become scarce and, when found, are regarded as intrusive.

Near modern Beijing, for example, an early Western Zhou cemetery for the lords of Yan (at Liulihe, Fangshan) included a handful of tombs constructed according to Shang custom, with waist pits, sacrificial victims and dogs, and even vessels of Shang date.⁷ (Some early Western Zhou tombs at Luoyang also show Shang burial customs.) These tombs at Yan could be the burials of Shang remnants who survived into the early Western Zhou period. Were they a colony on this frontier zone, or were they perhaps resettled after the Zhou deposed the last Shang king?

Viewed from Anyang, the North China macroregion was an extensive hinterland populated largely by Shang allies. The king moved extensively around parts of it. At its margins both southeast and north, were other peoples, some enemies or potential ones, from local cultures of those regions. But no other center could challenge the status of the great settlement. For its part, the great settlement dispersed its material culture among the small communities of the plains and frontier.

Enemy Statelets: The Northwest

Northwest of Anyang, however, the map looks rather different, both in geography and in local peoples, during the Late Shang period. Across the Huang River and west of Zhengzhou, the Taihang foothills lead to the loess highlands of modern-day Shanxi. This approach corridor had been occupied by people of the Erligang Culture, whom we believe were in fact the Shang, at such sites as Yanshi (Henan) and Yuanqu (Shanxi). Over the mountains lay Dongxiafeng, Xiaxian, and the Fen River valley that occupies the heart of Shanxi. Some Late Shang presence can be traced in this valley north to the vicinity of modern Taiyuan, but in that same region and west to the Huang, the finds, mostly burials, suggest a striking mix of peoples and cultures. This was a frontier zone not unlike

that south of the Yanshan range in northern Hebei and Beijing. Sites and artifacts here suggest some local communities were little affected by the Shang Culture of Henan. Warrior burials, however, are furnished with a mix of Shang and Northern Zone weapons, and suggest a few local lords who were put to rest in the Shang fashion (Box 18), complete with inscribed ritual vessels from the great settlement.

Box 18 The Lords of Bing

At Lingshi County in central Shanxi not far east from the Huang, three rich burials of Late Shang date document a local lord (*fang bo*). While the tombs are large when compared to most in cemetery tracts at Anyang, their real distinction lies in an amalgamation of Shang cultural habits with others not known at Yinxu. The wooden chambers and coffins, sacrificial victims, and dogs in waist pits follow Shang custom (Figure 5.4). On the other hand, the presence of one or two females buried inside the same chamber with a male placed at the center is not attested at Anyang. Perhaps a wife and/or consort of the male was put to death at the time of the funeral?

Similarly, many of the goods in the Lingshi graves are easily recognized as products of Anyang foundries, but the ritual assemblages differ from Shang norms. In two graves, the sets include four *gu* goblets with ten *jue* pouring vessels, an imbalance not typical of Yinxu. About half of the vessels and other objects carry inscriptions; two-thirds bear the same graph, "Bing" (Figure 5.5). This is a well-known lineage emblem, with at least 170 examples recorded, most among unprovenanced vessels. The same name is found in oracle-bone inscriptions during the reign of Wu Ding. Wu Ding did not campaign against Bing, but rather joined with them to attack the Qiang. Perhaps these tombs are traces of the lords of Bing, a Shang ally in the Fen River region.

Amid these trappings of a local lord are other clues. In tomb 1, a *gui* vessel rendered in a style dated to Yinxu period III is not inscribed, but instead bears a profile rendering of a horse on its base (Figure 5.6). This same tomb also held a unique object, a baton of cast bronze about 28 cm long (Figure 5.7). Animal-mask fittings are at the top and bottom of its grooved handle; the former forms a clasp for holding something (stone or jade?) inserted. No similar regalia is known from Anyang finds, although a rare example of a bronze handle inlaid with turquoise and attached to a jade blade in the Freer Gallery could have had a similar use. The Lingshi baton is

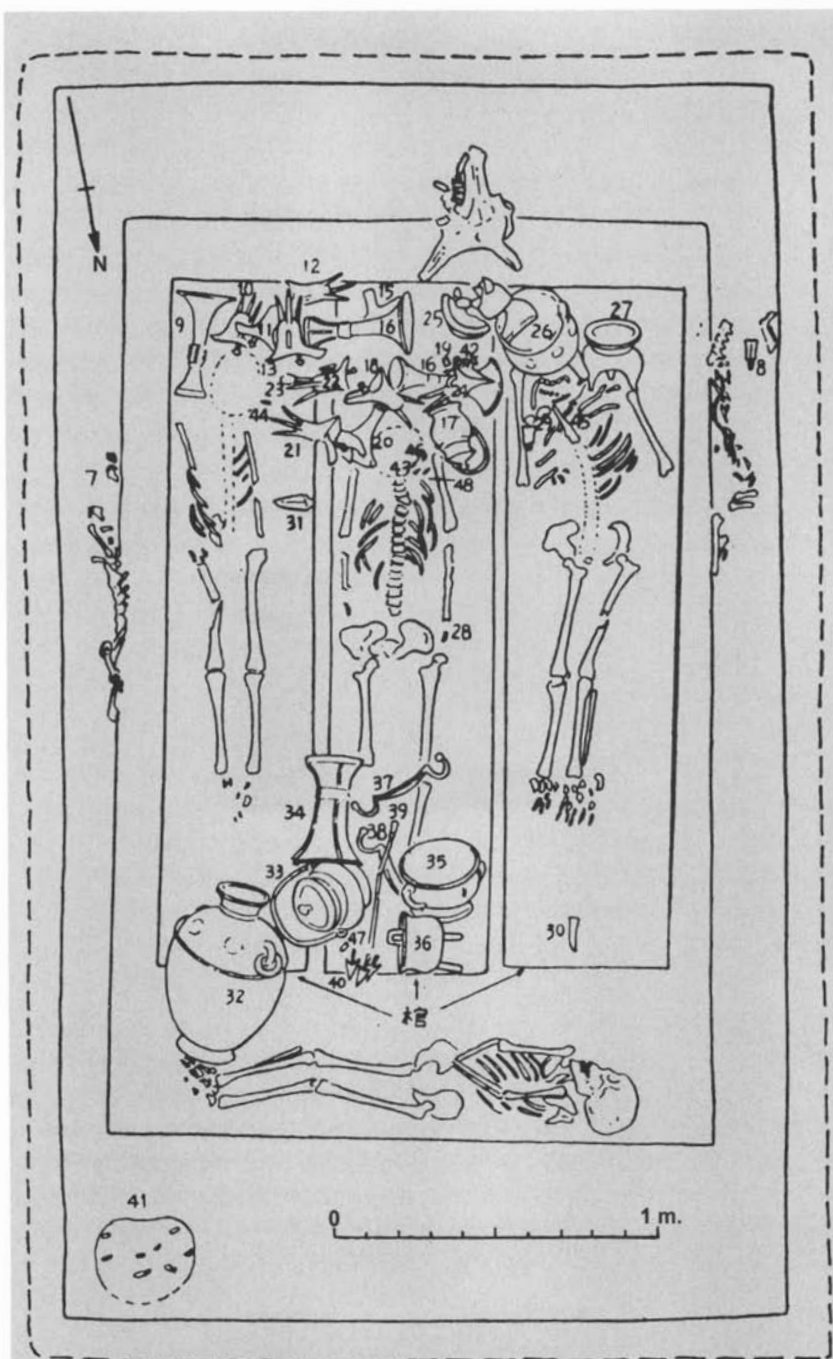


Figure 5.4. Plan of M1, Lingshi, Shanxi. *Wenwu* 1986.11:2.

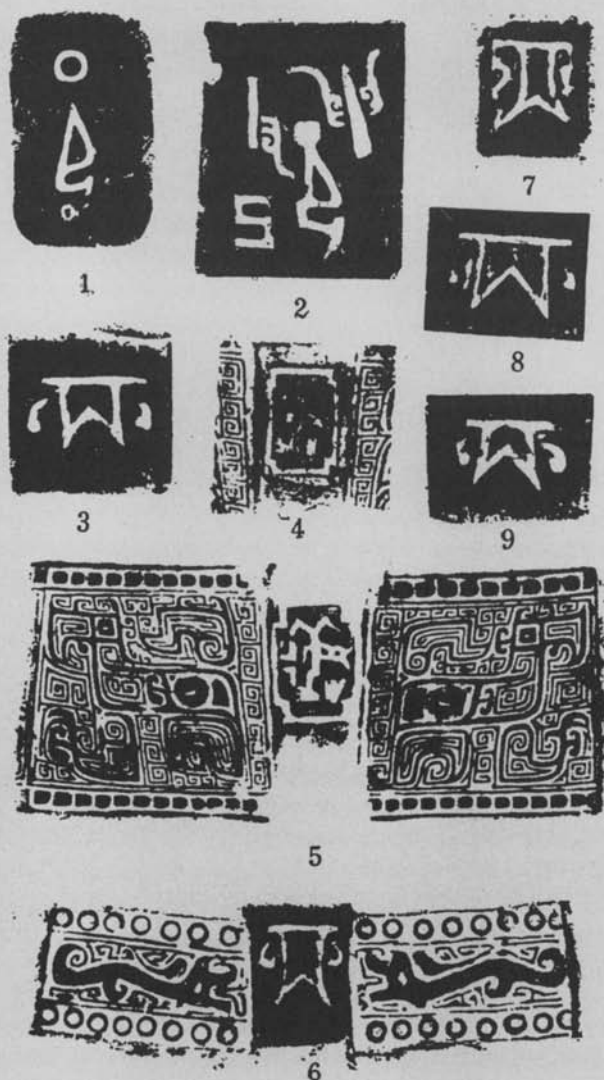


Figure 5.5. "Bing" emblems, Lingshi M1. *Wenwu* 1986.11:7. The clan emblem "Bing" is usually rendered in isolation on vessels from this tomb (for example, nos. 3, 6, 7, 8, 9). The same clan emblem is reported at find spots around Anyang (compare Figure 3.13, no. 1), perhaps documenting relationships between the royal cult center and a distant settlement in Shanxi near where these burials were discovered.

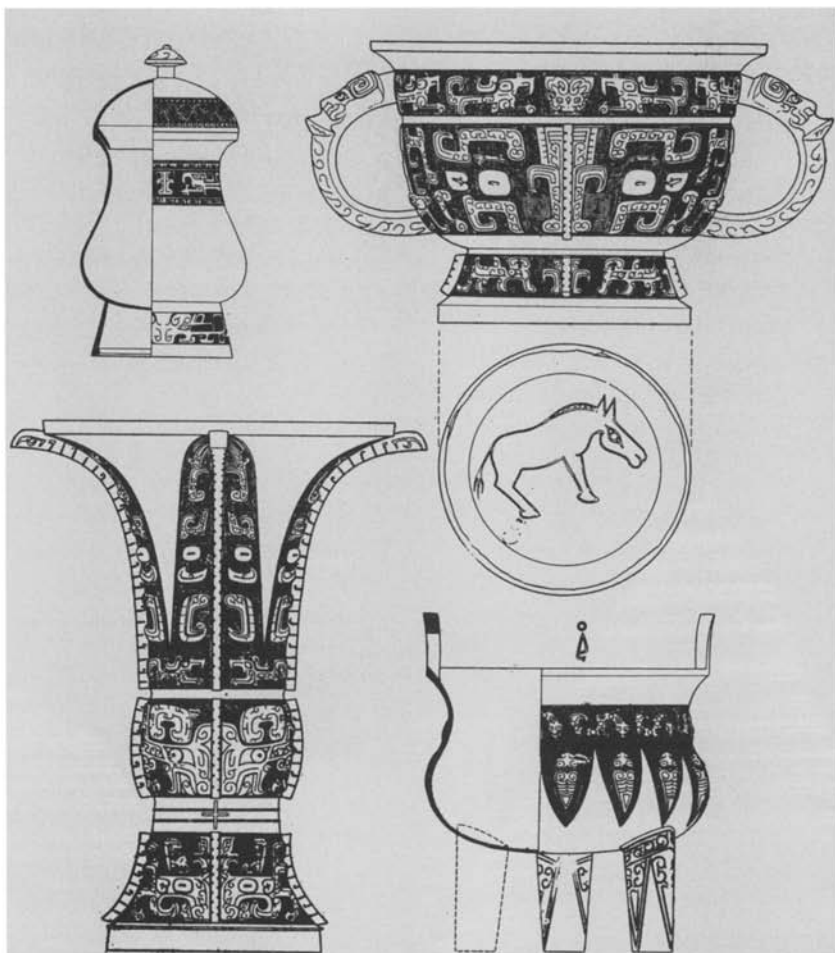


Figure 5.6. Bronze vessels, Lingshi M1: *zhi*, *gui* with horse on base, *zun*, and *ding*. *Wenwu* 1986.11:5.

an obvious candidate for a token of rulership. A final intriguing object is a *ge* blade, of the type called *kui* or *zhuo*, with fine line relief and reticulate work on its spine (compare Figure 3.25a). Could this be a southern weapon, not a Shang or Northern Zone type? The assemblage in Lingshi M1 could be explained as a combination of objects made at Anyang with others locally produced, perhaps even with a southern *kui* passed on as a gift from the Shang king.

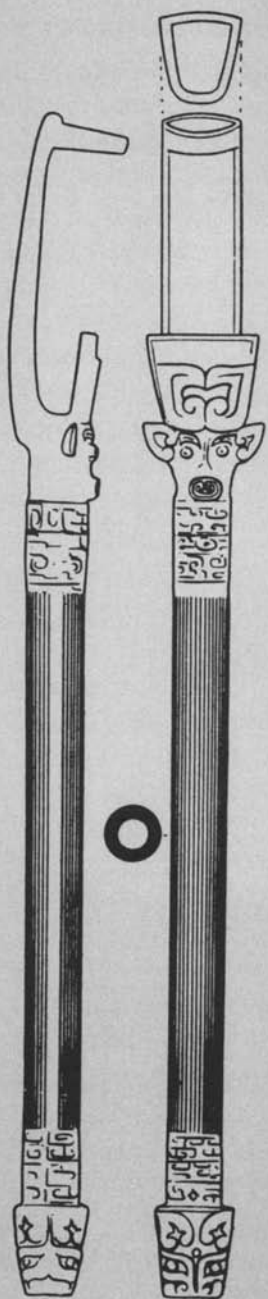


Figure 5.7. Baton, Lingshi M1, height 28.1 cm. *Wenwu* 1986.11:9.

West, beyond the great bend of the Huang in modern Shaanxi, something of the same pattern emerges. Along the Wei River marching towards Xi'an and eventually Qishan and Fufeng are cemeteries and burials that indicate a Shang presence starting in the late Erligang period, and continuing through the Huan-bei period into Late Shang. The only substantial early site reported so far is the cemetery at Laoniupo, east of Xi'an on the south side of the Wei River.⁸ The major later site is at Fengchu village, Qishan County, on the north side of the river, best known for its temple-palace complex and oracle-bones (see below). It looks as if Shang colonies or outposts advanced into the Wei valley much as others did along the Fen River.

In northern Shaanxi, however, no Shang outposts are known as yet, but we again find burials with Northern Zone weapons much like those in Shanxi across the Huang. These highlands are deeply dissected by gullies and valleys. Even in this period, the inhabitants took advantage of the loess to construct cave dwellings. In the Anyang oracle-bone inscriptions these frontier zones of Shaanxi and Shanxi were the domain of the Guifang, Tufang, Bafang, and Qiangfang, all persistent hostile groups that threatened Shang allies and even the Shang themselves. Wu Ding exerted himself against some of these foes, as did Lady Hao. It seems plausible to identify warrior burials containing non-Shang weapons with these same hostile groups, although specific associations are probably not tenable (Figure 5.8). Shanxi archaeologists, however, suggest the burials near Shilou along the east bank of the Huang should be the Guifang, Wu Ding's major nemesis. Perhaps the same groups occupied areas west of the river in Qingjian and Suide counties, Shaanxi.

Settlements in the Wei River valley represent a mix of peoples, or so archaeologists in Shaanxi conclude, based primarily on their classification of pottery.⁹ The Zhou (or Zhoufang) may be represented among these archaeological cultures, but it is not likely they were always in the Wei River valley. One respectable line of analysis places them in the Fen River during the early part of Late Shang, which correlates well with their visibility in Anyang oracle-bone inscriptions.¹⁰ Their later loss of visibility and designation as Zhoufang may be the result of movement west to the Wei valley and a change in status from allied statelet to hostile one. Some portion of the archaeological record in the Wei valley could also represent the Qiang. We know that Shang forces regularly captured Qiang, since they are the most prominent of the human sacrificial victims noted in the inscriptions. The diversity Shaanxi archaeologists see in the pottery of the Wei valley may be more pronounced than the actual situation among the living communities that produced those wares. Even so, it would be fair to conclude that two or three communities coexisted during Late Shang times in this area: the Shang, the Zhoufang, and still others like Qiang.

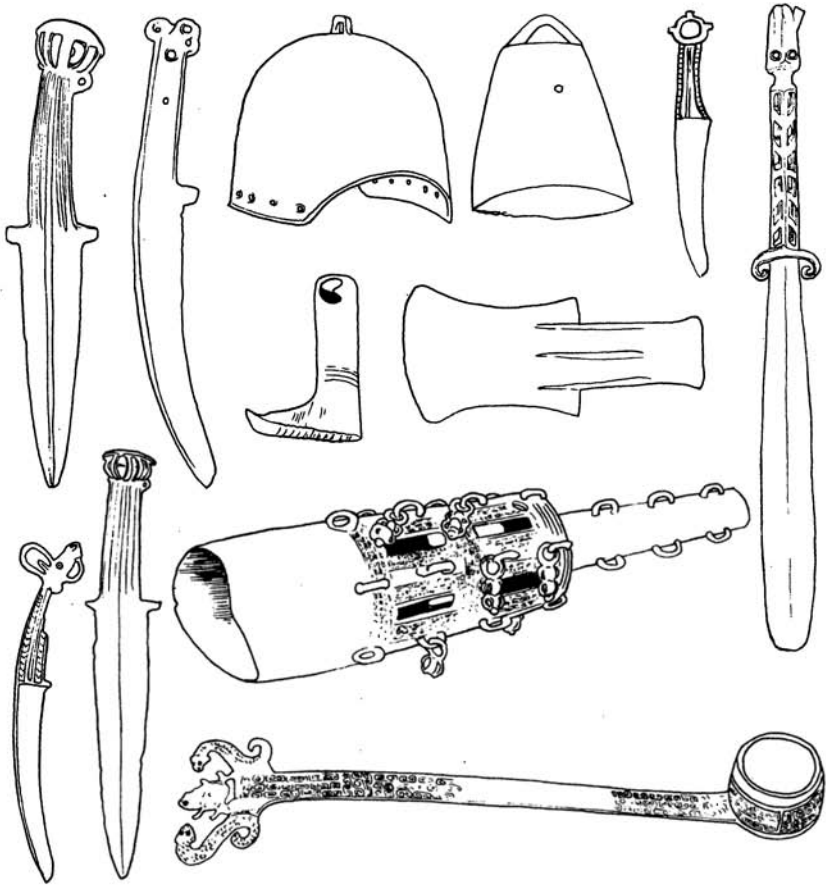


Figure 5.8. Northern Zone weapons and regalia, sites in Shanxi and Shaanxi. Tian, *Kaoguxue wenhua* 4 (1997), p. 271.

As the crow flies, the frontier and hostile peoples were considerably closer to the Great Settlement on the northwest than on the northeast. On the other hand, the intervening terrain channeled movement of people along a few river corridors with mountains blocking access elsewhere, a considerable contrast to the expansive open plains north and east of Anyang. Shang allies in the Huang, Fen, and Wei valleys both protected the routes leading to the Great Settlement and played a role in transmitting elements of northern material culture to the Shang. One suspects the horse-drawn chariot entered the Shang world, literally, along these routes. Horses likewise may have been brought down into northern

Henan via these regions. Perhaps horses and chariots were gifts or war booty from the Gui-fang or Qiang?

Distant Peoples: The Yangzi Regions

The Yangzi, with its many tributaries and lakes, was straddled by the Erligang Culture horizon. Sites like Panlongcheng (north of Wuhan, Hubei) and Jingnansi (near Jiangling, Hubei) were Shang colonies of that period.¹¹ The same may hold true of sites in Jiangxi. The growth of the Erligang Culture left technologies that were employed by local peoples. Prized resources came to Anyang from this region, most notably copper from the mines of Jiangxi and Anhui, and hard pottery and stoneware. Yet it has been impossible to identify any bonafide Shang sites in Hubei, Hunan, or Jiangxi after the time of the dynastic move to Anyang. Nor have any burials that might be interpreted as powerful local lords, like those of Henan, Hebei, Shandong, Shanxi, or Shaanxi, been found. How much the Late Shang court knew about this region and interacted with it remain open questions.

The Middle Yangzi was dominated in the second millennium by Lake Dongting. The main tributary of the Yangzi in Hubei, the Han River, links the lake to points north all the way into the Qinling foothills of southern Shaanxi. This natural corridor facilitated the transfer of southern resources and products to the Northwest macroregion as well as to the central plains. Finds at Chenggu (Shaanxi) testify to transfers of southern and northern goods via this route.¹² The main tributary of the Yangzi to the south, the Xiang, also provided a transportation and communication corridor leading toward the Nanling Mountains. A few sites of Late Shang date are known here, notably a complex of kilns for hard pottery on the east shores of Lake Dongting at Feijiahe, Yueyang.¹³

If surveys and settlement excavations are still scant, the evidence of chance finds is impressive. Relatively little of Late Shang date has been reported from Hubei, but Hunan boasts many striking discoveries. Some of these finds are objects that probably emanated from Anyang foundries, although this conclusion is derived from their style alone. Local products, however, are unquestionable: animal-shaped vessels, a large number of *lei* and *zun* types in distinctive renderings, and huge *nao* bells that have no counterparts in the North (Box 19).

Evidence for founding is limited, however, to one site, Zaoshi, Shimen County, Hunan, so the argument for local production rests mainly on characteristics of the objects themselves.¹⁴ This line of analysis, begun by Virginia Kane in the 1970s and continued since by Robert W. Bagley, led to recognition of cultures that coexisted with the Shang before the finds at Dayangzhou and Sanxingdui brought this general topic into the

Box 19 *Nao* Bells of Hunan

Chinese civilization had many sources. Musical bells are an apt example of a process by which several regional sources combined to yield a characteristic feature of the historic, Zhou culture. In that period, sets of musical bells (*bian zhong*) were as important as ritual vessels and weapons, and their performance was integral to rites that were themselves the essence of civilized society. Yet it was not always so: in the Late Shang period, no such sets existed.

Instead, at Anyang one finds only small bells of a type usually called *nao*. This term was adopted by the antiquarian scholar Luo Zhenyu about 1930, consistent with Han-period lexicons he consulted. Anyang *nao* are small (height 7–21 cm), hand-held bells, with a shank at bottom and elliptical body open at the top (Figure 5.9). *Nao* have been found in at least eight Anyang burials in groups of three or five, both plain and decorated, some inscribed. To emit a tone, they were struck near the rim, although no mallets are yet identified. It is possible that *nao* were also made and used in outlying locations; a few have been found in Shandong, for example. They may also have been carried to the South, but as yet no examples of the Anyang variety have been excavated there.

At about the same time (Yinxu period II), however, another sophisticated bronze industry began manufacturing *nao* bells of

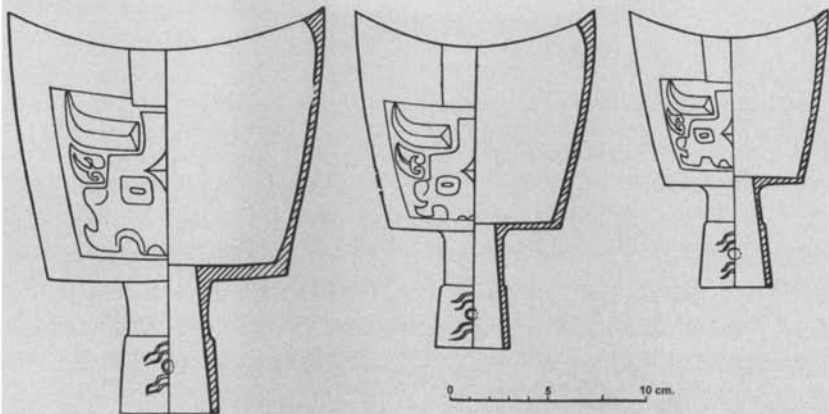


Figure 5.9. Anyang *nao* bells, West Zones M699, Yinxu period IV, heights 14–21 cm. *Yinxu de faxian yu yanjiu* (1994), p. 300.

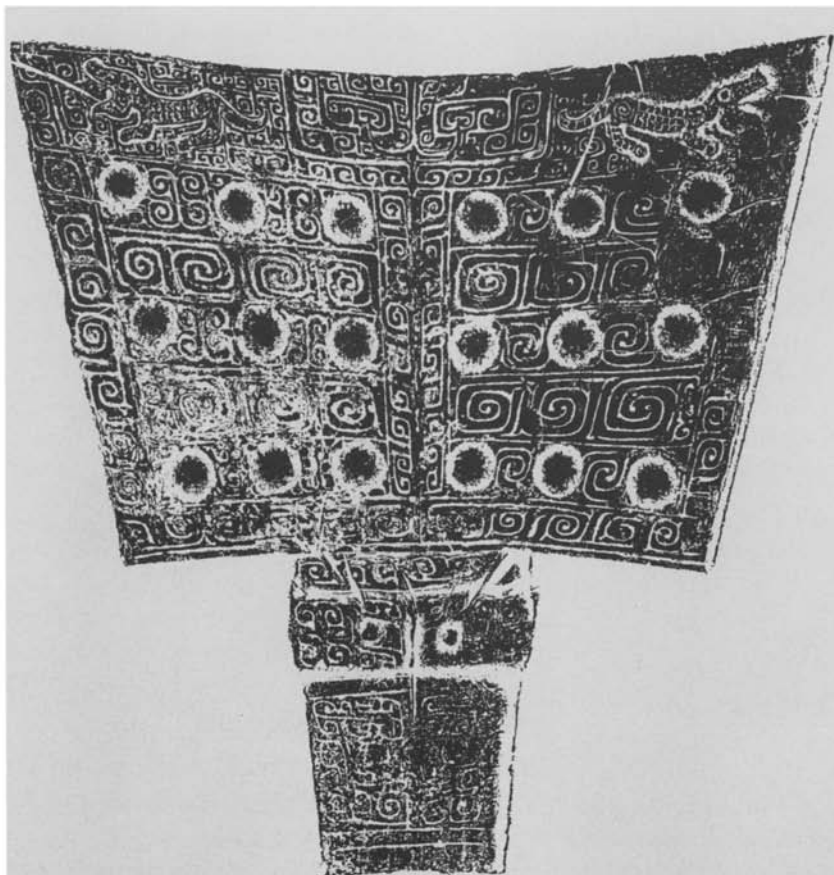


Figure 5.10. Rubbing of giant *nao* bell, Shiguzhai, Ningxiang, Hunan, height 50 cm, weight 24 kg. *Wenwu* 1997.12:23. One of ten bells found in a shallow oval pit near the crest of Shiguzhai Mountain in 1993. Five other *nao* were found nearby in 1959. This example is the only one of nine like it (a set, *bian nao*) that has “tigers” in relief in the two top corners. Bells in this set range from 36.5 to 53.5 cm in height, and from 9.5 to 31 kg in weight

heroic proportions only tenuously related to the Anyang specimens. About half of the forty-some examples found south of the Yangzi were recovered in Hunan (Figure 5.10), so some scholars trace their origin here. However, the Xin’gan tomb of much the same period held three *nao* bells of respectable size, each slightly different in shape; we cannot rule out their inception in the hybrid

culture of Jiangxi. The Hunan examples are by far the largest (up to 100 cm) and heaviest (maximum weight 221 kg). All the Hunan bells are decorated, some with stylized animal masks and others with fields of bosses surrounded by fine curls.

The richest concentration of large *nao* is Ningxiang County, Hunan, where at least twenty are reported. This large number is the result of two extraordinary finds near the crest of Shiguzhai Mountain. In 1959, a set of five *nao* were found in a pit, placed in three layers of two, two, and one bell each. In 1993, only 40 m away from the first pit, another group of ten giant *nao* were excavated, this time in four layers (three-three-three-one). The Ningxiang bells, however, were not consistent in size and decoration. In the first group of five, two had elephants and two had tigers augmenting their decor. In the case of the more recently reported ten *nao*, nine were similar, but varied in height and weight, while the tenth was distinguished by an animal mask motif. It has been shown these ten *nao* form a chime, a set of tuned bells that emits a predetermined sequence of musical notes.

Large upright *nao* bells were a distinctive component of the Yangzi cultures contemporaneous with Late Shang Anyang. They may not, however, have been used for musical performance. Most were found singly in pits on mountain slopes and along rivers. They were used perhaps for solemn convocations, for sacrifices to nature powers, or for warfare. There is mounting evidence, however, that these large Southern bells inspired the creation of shank bells (*zhong*) suspended in the opposite orientation with mouth down, that were manufactured for chimes from Western Zhou times forward. Thus the musical bells of Zhou created in the Wei River valley would derive from both the cultures of Shang Anyang and the South. An element integral to classic Chinese elite culture thus would seem to have a mixed pedigree.

spotlight.¹⁵ The local culture of Hunan, still unnamed, utilized bronze objects in ways foreign to the peoples of the North. Most of the bells, vessels, and animal-shaped containers have been found in isolation, often the random discovery of peasants while digging in the mountains. The paucity of associated artifacts generally rules out a burial context, although a few recent discoveries have held some pottery. Several are said to be located near habitation sites of the period. Moreover, the vessels, both imports and local types, were sometimes used as receptacles for jades or shells, a custom we will also note at Sanxingdui, in Sichuan.

Most writers have deduced that these are sacrificial offerings rather than funeral deposits, perhaps gifts to the spirits of a mountain or stream.

Across the river from Panlongcheng in northern Jiangxi (the Gan Yangzi macroregion), a hybrid culture developed during the Erligang and Huan-bei periods (see Chapter 2). The culture is named after its type site, Wucheng (Zhangshu, Jiangxi), but might equally well be identified with its richest find, the tomb at Dayangzhou, Xin'gan County (see Figures 2.23–28). While the type site offered evidence of a walled settlement, some casting debris including stone molds, abundant hard pottery and stonewares, as well as graphs on pottery, the Xin'gan tomb demonstrated the maturity and creativity of the local bronze industry.¹⁶ Fully conversant with casting and design as practiced in the North, the Xin'gan foundry produced bronzes that are often unusual: animal-shaped objects, humanlike faces, birds and tigers appended to conventional vessel types, and the earliest large bronze bells (*nao*).¹⁷

More recently, considerable work has been conducted at a major copper mining complex called Tongling, in Ruichang County bordering the Yangzi River (see Chapter 2). The richest concentrations of copper known in China today are found in precisely this same region, south of the river near Lake Boyang. The ore bodies here were exploited as early as the Erligang period, and indeed a settlement nearby at Tanshuzui could have housed some of the colony's workforce.¹⁸ If Panlongcheng was indeed a Shang outpost, its probable mission seems clear: to safeguard the transport of vital copper to the North. The investment in developing this mining complex made by the people of the Erligang Culture paid off also for the local inhabitants, who created the earliest sophisticated bronze industry in the South.

The destination of some Tongling copper was far up the river, beyond the Three Gorges that delimit the eastern edge of the Sichuan basin. The earliest bronze-using culture here is named for a walled site about 40 km north of Chengdu in Guanghan County (Figure 5.11).¹⁹ Sanxingdui flourished from the eve of the Erligang period until the beginning of Western Zhou, and had at least indirect relations with the North during that time. The walled area is still under exploration and the wall itself only partially preserved. The best-known finds are two remarkable pits filled with hundreds of prestige objects of bronze, gold, and jade, among other things. The finds would seem to correspond to contents of two temples or ritual precincts replete with human images (standing and kneeling figures, heads, and masks of bronze), ritual vessels of the types favored in the Middle Yangzi, and a great quantity of jade and stone blades and scepters. Most of these objects had suffered from a great conflagration, and were interred on two occasions along with elephant ivory and animal remains, also burned (see below).

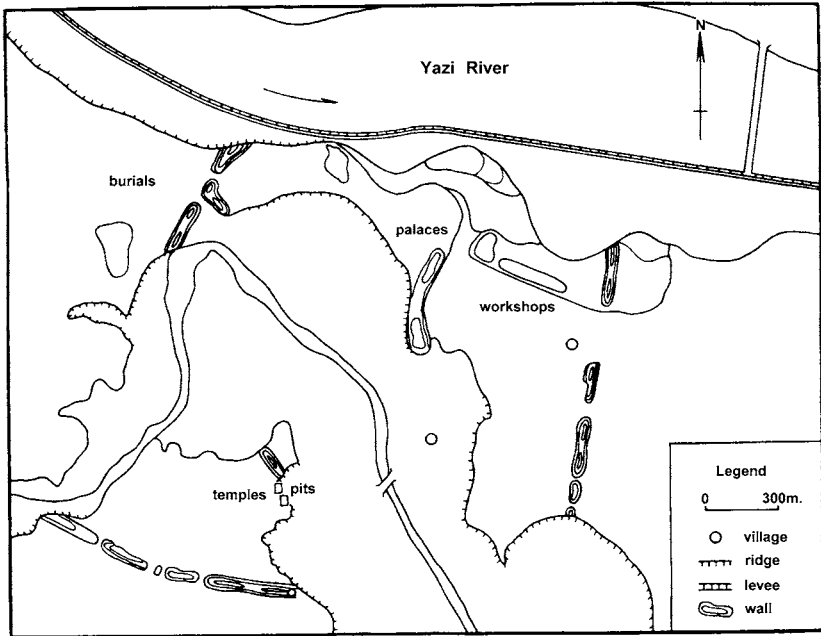


Figure 5.11. Plan of walls, Sanxingdui, Guanghan, Sichuan. Sun, *Sichuan pendu* (2000), p. 164. In this site plan, the Yazi River flows from west to east across the north of the walled area. Sections of the east, south, and west walls delimit an area approximately 1800×2000 m. Burials appear to be situated outside the west wall on the south bank of the river, while a palace zone (Yueliangwan) seems to occupy a terrace in the center of the city overlooking the river. A workshop zone (Zhenwucun) may be just east of it. The two pits are in the southwest quadrant of the walled area.

Long-term borrowing evident among these and other finds at the site probably starts with the Erlitou period: ceramic types like *he* pouring vessels, jade and stone scepters similar to examples known from Shenmu, Shaanxi, as well as Erlitou, and bronze plaques with turquoise inlay. Persistent contact during the Erligang and Huan-bei periods is suggested by the many jade and stone *ge* dagger-axes, some faithful to Erligang prototypes, others given distinctive treatment. The ritual vessels (*zun*, *lei*, a fragmentary *pou*, and a *pan*) were most likely imported from the Middle Yangzi, and date from the Huan-bei period or early in Late Shang (Figure 5.12). On the other hand, contact seems to have declined or even disappeared entirely by the latter part of Late Shang.

Sanxingdui thus constitutes a third center of bronze production in the south during the Late Shang period. The industry represented by

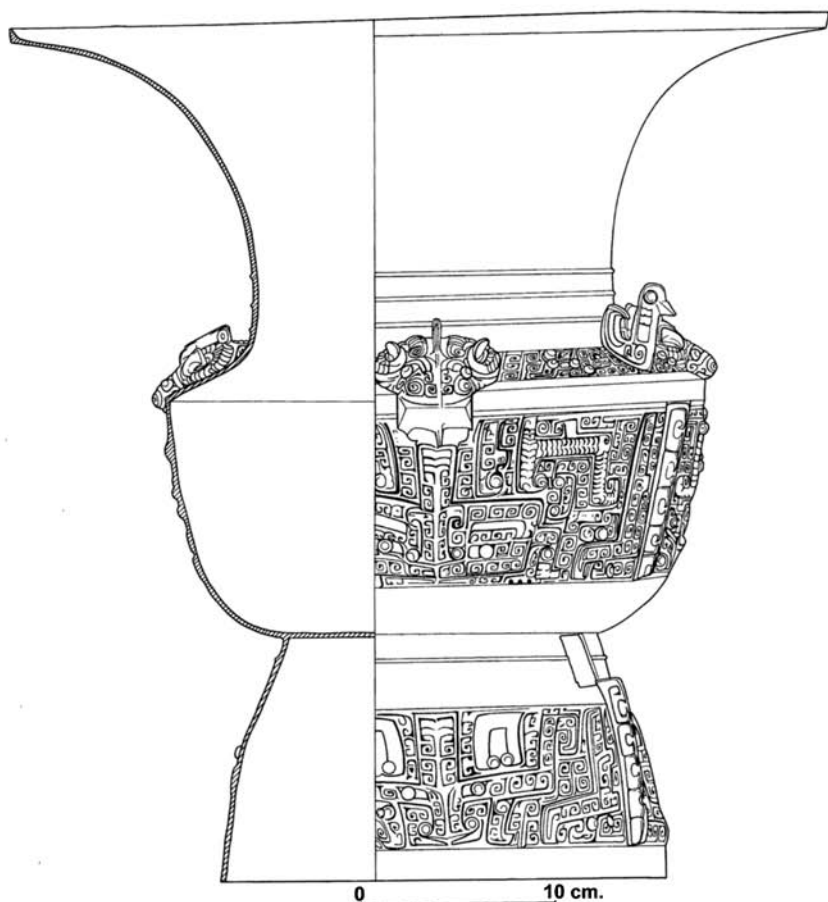


Figure 5.12. Bronze *zun* vessel from Sanxingdui pit 2, K2(2):129, height 45.5 cm. *Sanxingdui jisi keng* (1999), p. 254.

the Dayangzhou tomb in Jiangxi developed first, production of *nao* bells and other objects in central Hunan probably came shortly thereafter, with Sanxingdui commencing at about the same time. At present, it appears that Jiangxi casting declined during the middle of the Late Shang period. In Sichuan, the focus of activity seems to have shifted to the suburbs of modern Chengdu, at a site of huge extent called Jinsha.²⁰ Here a major center may have continued into the Western Zhou period. Production in Hunan also continued through the end of Shang and into the early Western Zhou period.

Less affected by Late Shang developments in the North China region were the lower reaches of the Yangzi River, modern Anhui, Jiangsu, and Zhejiang. Northern Anhui straddles the drainage of the Huai River and is a transitional zone between northern and southern climates and environments. Jiangsu and Zhejiang comprise the low-lying delta of the great river, punctuated by small streams, lakes, and marshes surrounded by low hills. The local cultures of the delta region are characterized by their hard pottery with stamped impressions (*yinwen ying tao*), as well as by earthen-mound tombs that still dot the landscape.²¹ After the Huanbei period, there is little evidence in these provinces for either imported bronze vessels or local castings. The development of ceramics, however, was impressive, as dragon kilns of Shang date at Wucheng, Jiangxi, and Shangyu, Zhejiang, attest. With Jiangxi and Hunan, this was a major source for hard pottery and stonewares throughout the Shang world (see below).

Exchange Relations: Resources and Products

The Late Shang world was defined above as a realm affected, both directly and indirectly, by the great settlement at modern Anyang. We assess the impact of this early state primarily from the material record, physical traces of the way the Shang did things or made things. These traces range from a pounded earth wall or carefully constructed burial to the material culture of the elite, their bronzes, jades, ceramics, and occasionally other craft products. The Late Shang world is thus far broader and more diverse than the much smaller area the Shang kings often controlled through charisma and force of arms. One can think of this world as nested areas: (1) the Shang heartland or core, with Anyang as its only (?) major center; (2) the hinterland of compliant allies and village communities who served the Shang and provided a kind of buffer zone; and (3) the frontier of hostile statelets and other peoples, who fought the Shang or their neighbors. In addition, there were more distant areas outside the Shang world to which Shang objects might travel. In our terms this Late Shang world embraces six macroregions: North China, Northwest China, the Upper, Middle, Gan, and Lower Yangzi. By contrast, the Late Shang state probably controlled at most much of Henan and some parts of Hebei, Shandong, and Shanxi, all within the North China macroregion.

In Late Shang times, the settlement at Anyang exerted both centrifugal and centripetal force on peoples, resources, and things. Moving out from the heartland nucleus were Shang people sent on missions for the king, allies returning to their own settlements, and every manner of craft production associated with both, from bronze weaponry and vessels to

items like carved jade, lacquer wares, carved bone or ivory, and textiles. A Shang colony established at some distance from Anyang brought some of these objects with it. If allowed to settle in for a time, their burials might hold these same things in the ground. A Shang ally might bear tokens bestowed by the Shang king, and could have acquired other craft goods from Anyang workshops, which likewise might someday be buried with him. These objects could include things not made in Anyang, but instead gathered there, such as southern stoneware or various weapons. It is unlikely that a high quality ritual vessel, especially one with an inscription, found in the Shang hinterland or on the frontier, was actually made on or near the spot where it is found. It more probably emanated from Yinxu. Such objects could be propelled even further, when secondary exchange, peaceful or otherwise, sent it into a still more remote area.

The centripetal forces were equally strong but perhaps more varied. Qiang captives came to the great settlement, where they might be sacrificed in a tract at Locus North or Xibeigang. High-fired hard pottery and stonewares came to the settlement but also radiated across North China, from sources in the Yangzi drainage (see below). Jade stone from Khotan (Hetian, Xinjiang) somehow traveled into North China (as well as the south?), to be worked there. Other resources from the sea (cowries), from the humid tropics (lacquer, ivory, crocodile skins), and from the copper and lead mines of the Middle Yangzi and distant southwest, also arrived in Anyang for casting weapons, vessels, and chariot gear. This cannot have been a one-way traffic, so some of the centrifugal movements above might be what the Shang themselves exchanged for another region's resources. With the exception of ceramics, most processing of these materials took place at the great settlement itself, some within the substantial ditch surrounding the palace core.

High-Fired Ceramics

In discussing workshops at Yinxu, we noted only a few kilns reported to date. By contrast with bronze founding and jade working, quintessential crafts for the king and elite, production of the most plentiful artifacts of everyday life still cannot be localized at Anyang. Perhaps potting villages located nearby supplied the cult center with its needs, both a multitude of gray earthenware vessels for daily life as well as low-fired types found in graves. (A number of kilns are reported at sites of this period on the Zhang River, modern Hebei, north of Anyang.)²² Several other kinds of ceramics are to be found at Anyang sites, including the hard white pottery discussed above (See Chapter 3), the so-called "stamped hard pottery" (*yinwen ying tao*), and glazed "protoporcelains" (*yuanshi ci*). With the exception of six glazed sherds recovered near Wangyukou, west of

Xiaotun, there is no evidence at Anyang for production of these last two wares.

Chinese scholars distinguish between pottery or earthenware (*tao*) and porcelain (*ci*). Ordinary clays are used for the former; they are fired around 800–1000 degree celsius. The resulting wares are easily broken and highly permeable. Porcelains by Chinese definition are made from *kaolin*, a porcelaneous clay, fired around 1200 degrees. They are far stronger, with a fused body that is almost impermeable. The fired clay is white or nearly so, translucent, and produces a metallic sound when struck. With glaze applied, the surface is even more lustrous and the vessel impermeable. High-fired wares of the Shang period exceed the customary characteristics of earthenwares, and so are grouped into intermediate categories like “hard pottery” or “protoporcelain” (protoporcelain because bodies are not yet pure white or translucent). Non-Chinese scholars would classify the two categories as “stonewares,” to signify their high firing temperatures and glaze.

In fact, distribution of these stonewares is heavily skewed toward the Yangzi regions. At the Wucheng type site in Jiangxi, the percentage of these two wares rises from 3.8 percent and 0.23 percent of total sherds, respectively, during the Upper Erligang period, to 16 percent and 13 percent by the end of Shang. At Zhengzhou, hard pottery is estimated at 0.005 percent and protoporcelain at 0.001 percent. The great tomb at Dayangzhou had 139 ceramic vessels, a remarkably high number for an elite burial anywhere. Fully 20 percent were either hard pottery or protoporcelain. No finds in the North compare with the abundance documented in the Gan River and Middle-Lower Yangzi macroregions. In spite of this sharp contrast in quantity, the discovery of glazed protoporcelain vessels at Zhengzhou (Figure 5.13) led Henan archaeologists to claim this ware was produced locally. Other subsequent finds at Zhengzhou, Yanshi, and Yuanqu dating to the Erligang period, and at Taixi dating to the Huan-bei period, have helped sustain the view that these wares were made in the North. In fact, Northern finds document yet another skewed distribution: only a few vessel types (*lei*, *zun*, *pou*, *guan*, *dou*) are known and those are found primarily in elite contexts. The Zhengzhou finds were burials with considerable investments of bronze vessels. Two glazed *zun* at the Yanshi walled site were from a pit at Palace D4. Anyang and other sites of the Late Shang-early Western Zhou periods also yielded these wares from elite tombs, as at Qianzhangda (Shandong), Tianhu, Taiqing Gong, and Luoyang (Henan), and Zhangjiapo and Qishan (Shaanxi).

Technical analyses published in the last decade should resolve debate on the source of these wares.²³ The stamped hard pottery and glazed proto-porcelains have essentially the same paste. This composition is

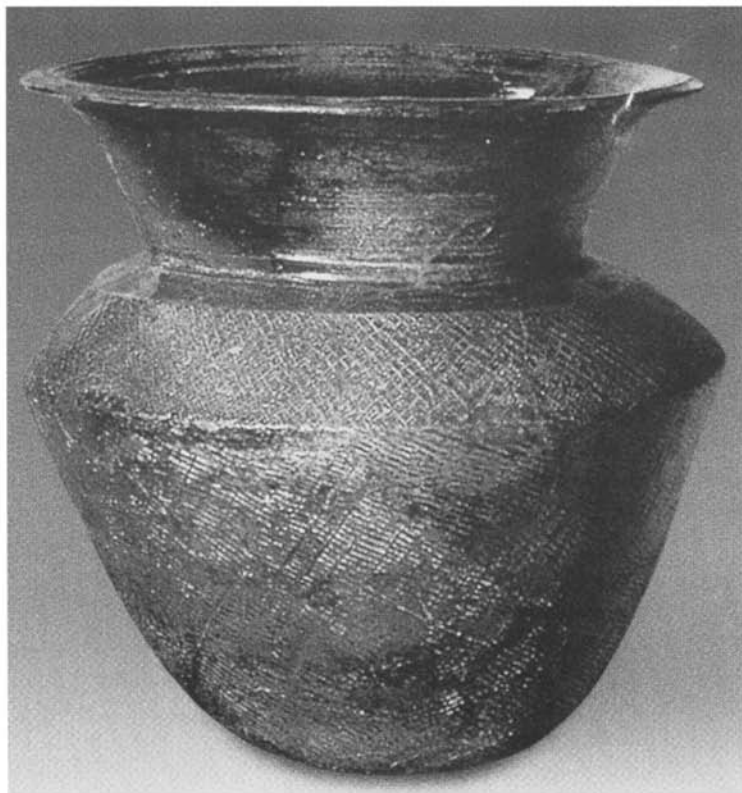


Figure 5.13. Stoneware *zun*, Zhengzhou, Henan, height 28 cm. *Zhengzhou Shang cheng* (2001), pl. 13.

not at all the same as clays available in the North or the earthenwares ubiquitous there. Moreover, the chemical composition of sherds of these wares found in the North closely matches the composition of examples found in the South (Figure 5.14). Identity of ingredients holds true for glazes as well. Not least, the firing temperatures, around 1,200 degrees, are 150–200 degrees higher than that documented among Northern pottery including the Anyang hard white ware. It can be argued that Northern kilns were unable to sustain such high temperatures, while Southern kilns could (as Liao Genshen proposes). Finally the actual fabrication of stamped hard pottery and glazed wares differs from methods used in the North, notably in the use of molds and treatment of the surface. In sum, every feature of examples reported from the North matches the characteristics of vessels far more abundant in the South.

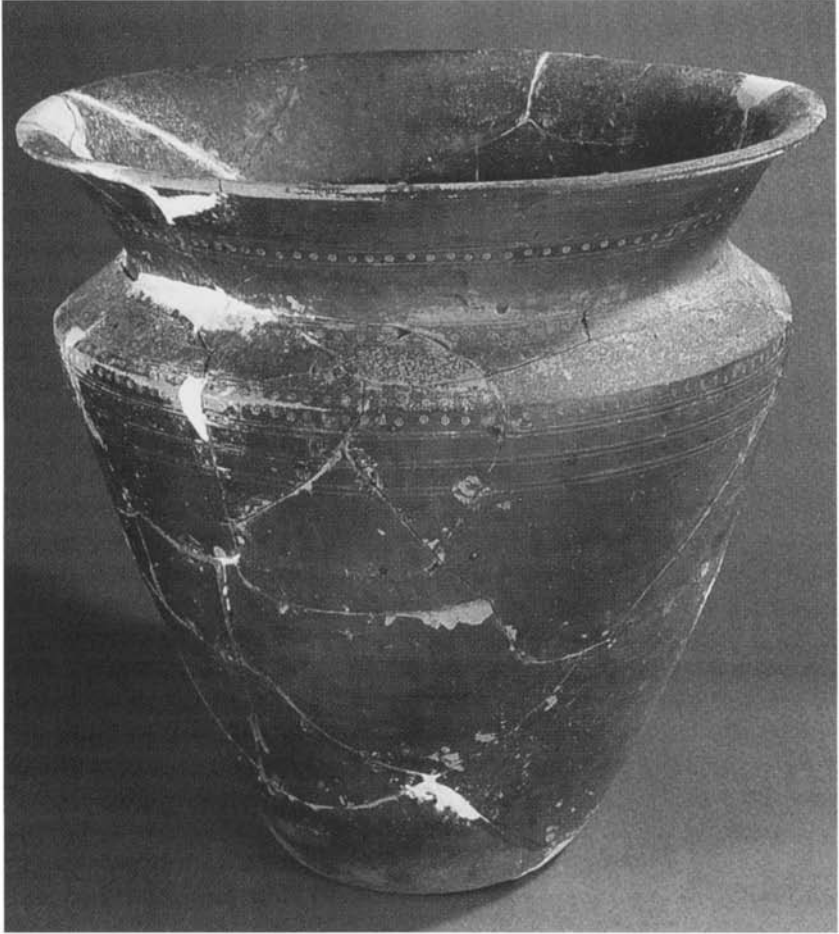


Figure 5.14. Stoneware zun, Xin'gan, Jiangxi, height 46 cm. *Xin'gan da mu* (1997), pl. 48.

The combination of distribution and technical data rehearsed here leads to the likelihood that the South was the leading area producing these wares in Shang times. Clays that withstand high temperature, glazes, and high-temperature kilns all originate in modern Jiangxi, Zhejiang, and Fujian. The "dragon kiln," a long firing chamber built on a slope, is documented as early as the Shang period at both Wucheng, Jiangxi, and Shangyu, Zhejiang.²⁴ Large-scale operations have also become better known in the South, including the six dragon kilns at

Shangyu, multiple kilns at Wucheng, and an amazing complex on the east shore of Lake Dongting, in Yueyang, Hunan. The Yueyang sites had at least sixty-three kilns.

The high-fired ceramics of the South establish yet another instance of dependence by the great settlement on distant resources and products. As with copper ores from Jiangxi, the royal Shang center in northern Henan relied on a distant source for many of its finest ceramics, a relationship perpetuated by new rulers in the early Western Zhou period. The transport of these vessels must have utilized the extensive waterways of the Yangzi regions. One can imagine that the Panlongcheng outpost played an intermediary role between South and North. The vessels themselves are quite lightweight, and packing them on the back may have been feasible. Of course, if they held contents their weight would have been greatly increased and the challenge of transport magnified accordingly. These wares did not circulate everywhere. None are found as early as the Erlitou period and type site, and none are reported at such western locales as Dongxiafeng and Lingshi (Shanxi), or Sanxingdui (Sichuan).

Exotic Resources

Anyang excavations have recovered a variety of exotica beginning with the first campaigns of 1928–37. For example, the prewar excavations recovered the skeletal remains of both elephant and whale, as well as cowrie shells. Some jade stones (nephrites) and turquoise were also reported, and evidence for these two minerals has increased substantially since 1950. Lacquer sherds and impressions have been reported from the chambers and coffins of medium- and large-scale tombs, from chariot pits, and as the skin of miscellaneous objects ranging from vessels to shields. No large intact lacquer objects have ever been retrieved, however. Ivory was also found in the Xibeigang tombs, and more recently tomb 5 yielded three magnificent goblets carved from elephant ivory (see Figure 3.16). Crocodilian remains have been reported at Anyang in the skin used for drum heads in M1217, Xibeigang. A few outlying sites offer similar evidence, including skins for a drum at Lingshi, Shanxi, and the designs on two cast bronze drums, one excavated in Hubei (Figure 5.15).

Since the initial recognition of these goods, none likely to be native to northern Henan, a broad network of trade, exchange, or tribute relations in Late Shang times has been obvious. Scapulas, tortoise shells, and jades with notations recording their offering were noted above, and would seem likely candidates for the kinds of goods demanded from allies who controlled such resources. Other raw materials like turquoise,

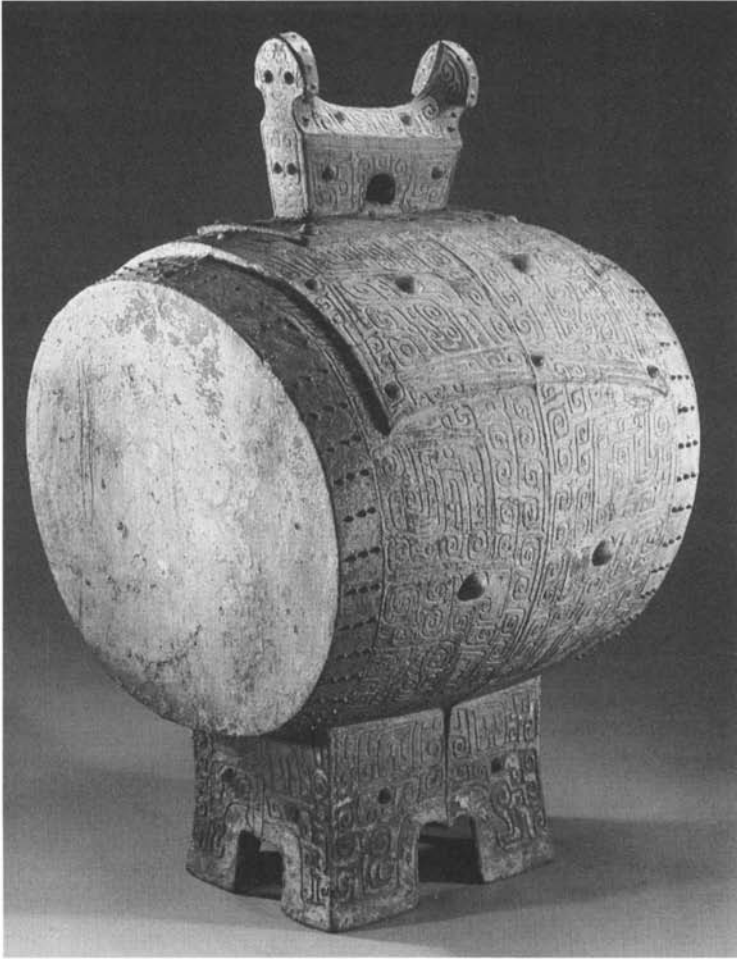


Figure 5.15. Bronze drum, Chongyang, Hubei, height 75.5 cm. *Wenwu jinghua* (1992), pl. 93.

lacquer, and ivory may also have been presented to the Shang king. The primary source of turquoise was the area where Hubei, Shaanxi, and Henan provinces come together, not too distant from the great settlement. Lacquer, ivory, and crocodile skins might have been carried from the Middle Yangzi into Henan. Perhaps lacquer sap was brought to Anyang in the hard pottery or glazed vessels produced in the south? A baby elephant skeleton found in 1978 near Wuguancun (the royal tomb

precinct) had a bronze bell, suggesting to the excavators that it was a pet. Could it have walked from Hubei-Hunan, or was it born in Anyang?

Nephritic jade stones originating in Xinjiang present the greatest unresolved question: documenting a trade pathway. The nephrites of Xinjiang do not appear in burials there until the early imperial era. However, such stones are found in Late Shang period tombs in both Anyang and Jiangxi, and in Western Zhou tombs near Xi'an (Shaanxi). The stones must have changed hands several times before being offered to the Shang. A variety of other so-called jade stones from Lantian (Shaanxi) and Nanyang (Henan) sources have also been identified. For some reason, the rich pits at Sanxingdui (north of Chengdu, Sichuan) are rather poor in nephrites, with other stones being favored instead.²⁵

Cause and Effect: Debts to Shang

The cumulative effects of the Shang culture on surrounding peoples have been considered several times above. In the Huan-bei period, peoples subjected to intensive interaction with the Henan centers learned some of their technology and material culture, as shown by the hybrid culture of Jiangxi identified with the Wucheng site and Xin'gan tomb. In the Late Shang period, rich tombs of local lords in Shandong, Hebei, and Shanxi provide evidence for the adoption of Shang ritual norms by local elites, probably through relations with the Shang kings. Other effects were more diffuse; for example, across the Northern Zone, some weaponry was derived from Shang, while in several regions some use of writing can be found on ceramics. Two regions, however, stand out: the Zhouyuan area of Shaanxi, and the Chengdu basin of Sichuan. In Zhouyuan, the Zhou lords left behind the only substantial evidence for both complex building and divination inscriptions outside of Anyang. In Sichuan, the great city at Sanxingdui and the huge site at Jinsha left traces of a local culture even more distinctive than the hybrid culture in Jiangxi.

Zhouyuan

Important work in the 1970s established the archaeological importance of the area straddling Fufeng and Qishan Counties (Shaanxi). Known as the "Plain of Zhou" in traditional sources (Box 20), this region is located at the foot of Mount Qi, homeland of the Zhou people according to *Shi jing* (*Book of Songs*). This area was well known to late Qing scholars for many important discoveries of bronze vessels. Similar discoveries continued from the 1950s into the 1970s. Caches of vessels, like that at

Box 20 Myths of the Zhou

With the founder of the Zhou people, Hou Ji (Lord Millet), we have the opportunity to compare two canonical accounts. The earliest telling of the myth is found in Ode 245, "She Who First Gave Birth to Our People," in *The Book of Songs*:

She who first gave birth to our people / Was Jiang Yuan. / And how did she give birth to our people? / She performed the Yin and Si sacrifices well / So that she might not be without child. / She trod in the big toe of God's footprint / And was filled with joy and was enriched; / She felt a movement and it soon came to pass / That she gave birth and suckled / The one who was Hou Ji.

She fulfilled her due months / And her firstborn came forth, / With no rending or tearing. / Without injury or harm. / And this revealed the miraculous, / For did not God give her an easy birth, / Was he not well pleased with her sacrifice? / And so she bore her child with comfort.

*She laid it in a narrow alley / But ox and sheep suckled it. / She laid it in a wood on the plain / But it was found by woodcutters on the plain. / She laid it on chill ice / But birds covered it with their wings. / Then the birds went away / And Hou Ji wailed, / Really loud and strong; / The sound was great truth. (Anne Birrell, *Chinese Mythology: An Introduction* [Baltimore: Johns Hopkins University Press, 1993], pp. 56-57)*

As Anne Birrell points out, the poem deals with many themes: "the ancestry of Chiang Yuan [Jiang Yuan], her relation to the god Ti K'u [Di Ku] . . . the fertility motif of God's footprint, the miraculous birth without pain or injury, the three trials of the child god, signs of protective presence of God in the people living close to nature and in the creatures of nature, and the mythic name Ch'i [Qi], the Abandoned" (*Chinese Mythology*, p. 116). The god Di Ku appeared in myths of both the Xia and the Shang above (see Box 7, 10).

When Sima Qian faced the task of working these same strands into his "Basic Annals of Zhou," he remade some details to fit into the chronology he had adopted from *The Book of Documents*. Most mythic elements were retained, but Hou Ji becomes a minister of agriculture for Yao who saves the people, rather than a god of agriculture.

When Qi (Hou Ji) was a child, he looked imposing, as if he had the bold spirit of a giant. When he went out to play, he liked planting hemp and beans, and his hemp and beans were very fine. When he became an adult, he also grew very skilled at plowing and farming. He would study the proper use of the land, and where valleys were suitable he planted and he reaped. Everyone went out and imitated him.

Emperor Yao heard about him and promoted Qi to master of agriculture, so that the whole world would benefit from him, and have the same success. Emperor Shun said, "Qi, the black-haired people are beginning to starve. You are the Lord Millet (Hou Ji). Plant the seedlings in equal measure throughout the hundred valleys." He gave Qi the fiefdom of Tai with the title of Lord Millet, and he took another surname from the Ji clan. (Birrell, pp. 57–58)

Zhuangbo in Fufeng, documented the presence of elite Zhou lineages beginning early in the dynasty, and their apparent flight in the eighth century B.C.E. Excavations in the 1970s also uncovered several clusters of well-preserved foundations, notably at Fengchu village (Qishan) and Zhaochen village (Fufeng).²⁶ Stratigraphy at the first site placed it in the Late Shang period prior to the "conquest," a relative dating supported by a deposit of inscribed oracle-bones found within one of the chambers of the structure. Initially scholars debated interpretation of this site: Was it a Shang outpost? A "predynastic" royal Zhou lineage temple? An elite edifice, but not a royal one, maintained from preconquest into postconquest times? Given the identity of the pottery at Fengchu with that from the Zhou cemeteries near Xi'an, we subscribe to the view this was a Zhou settlement.

The compound at Fengchu, seen here in a restoration by Yang Hongxun of the Institute of Archaeology (Figure 5.16), anticipates the classic courtyard or quadrangle house (*sihe yuan*) of Beijing. Yet Yang's rendering is not forced. Most details are carefully derived from evidence at the site. This is a compact and self-contained unit built upon a raised platform of pounded earth measuring 45 m NS by 32 m EW. Rectangular rather than square, as was Erlitou Palace 1 (see Figure 1.2a), the ratio of side to side is 3:2, approximately the same as Erlitou Palace 2, and the compounds recorded at Panlongcheng, Hubei (100 × 60 m) and Fucheng, Henan (70 × 55 m). The long dimension in every instance is aligned north-south a little west or east of present-day magnetic north. As at Erlitou and Xiaotun Locus North, the unit excavated at Fengchu is one of many foundations in the area, but here each was self-contained. As with earlier or contemporary sites, we regard the Fengchu site as a temple precinct, although specific evidence for ancestral rites within the compound is not reported. The cache of oracle-bones in pits 11 and 31 in a southwest chamber suggests elite presence and use, whether or not they were royal persons. Two cooking hearths in chambers along the east side could have supported sacrificial preparations or residential use.

In design, the Fengchu compound marries an elevated hall (*tang*), a large undivided interior under a roof, with solid-walled chambers (*shi*)

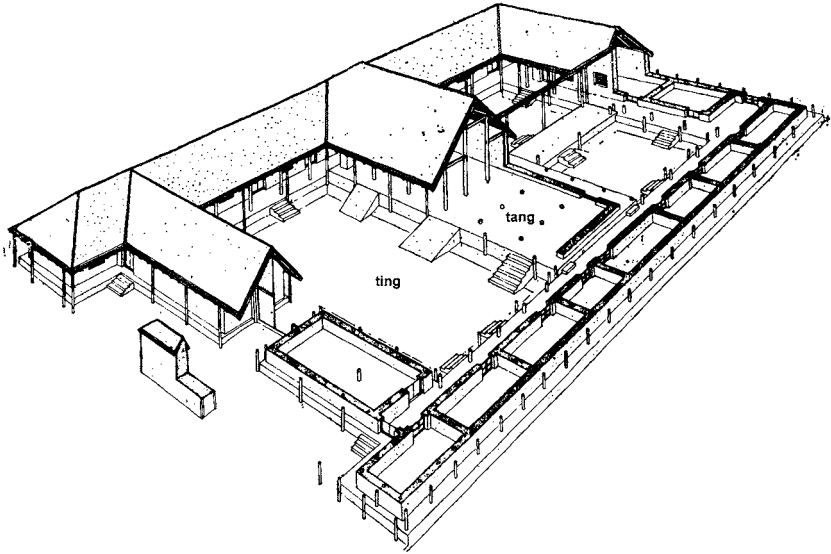


Figure 5.16. Courtyard, Fengchu Village, Qishan, Shaanxi, rendering by Yang Hongxun. Yang, *Jianzhu kaoguxue lunwen ji* (1987), p. 97.

commonly found as workshops or dwellings from Erligang times onward. Halls have been discussed at Erlitou, Zhengzhou (see Figure 2.9), Panlongcheng (see Figure 2.10), and over the tomb of Lady Hao (see Figure 4.5). In each case, the hall stood on a raised platform, not abutted by any nearby structure. At Fengchu, however, the hall is placed just behind a median line dividing the compound in half front and back. Its roof must have joined or approached the roofed chambers on each end; Yang shows the roofs actually intersecting. Steps or ramps are required to ascend the hall, and its floor is the highest level. Yards in front and rear are lowest with the flanking lines of chambers elevated above them but below the hall. From the postholes dug into the foundation block, a hall area of 17×6 m with six intervals across and three in depth can be inferred. Lines of posts are carefully aligned east to west, but not in depth. Yang and others suggest this alignment made possible lateral tie-beams to make the frame rigid. True bays, however, were not created, since alignment in depth varied from post to post. Unlike later bay systems, the posts were anchored below floor level, rather than placed atop bases at or above the floor. The hall was enclosed on both ends and across the rear, but its south facade left open.

Rows of chambers on each long side and across the back of the platform enclosed the yards and hall within. Common exterior walls were

divided on the interior into eight units on each side with five across the north. A maximum of twenty-one chambers (*xiang, fang*) might have been outfitted, plus two flanking gate houses (*shu*) on the south. The walls were constructed from pounded earth (60–90 cm thick), with some adobe and mud-plaster. Door openings and window frames are likely on the inside, allowing light to flow in from the yards. Roof overhang would have created a covered gallery fronting the chambers. This elevated walk allowed people to circulate from front to rear without following the central axis or crossing the main hall. All of the roofs in Yang's rendering are conjectural. The excavators found fragments of mud-plaster that retain impressions of beams and bundles of straw, possibly used as purlins between rafters. Rather meager quantities of broken tiles were found at the site. Perhaps tiles were used only for covering ridges or as gutters where roof slopes met?

Like Palace 2 at Erlitou, the Fengchu compound was entered from a central south gate flanked by solid walls. The yard (*ting*) within was a realm removed from the larger world, and a suitable assembly area for those invited to attend or participate in activities enacted on the raised floor of the hall. The multiple chambers in the Fengchu compound suggest a more diverse array of functions than the simpler, covered galleries at Erlitou. Recently (1999–) work has resumed at Zhouyuan sites.²⁷ Near Yuntang village, site of an extensive bone-working shop, several more compounds have been unearthed, although they are not the compact units seen at Fengchu. With earlier reports from Zhaochen, the Yuntang compounds suggest that this area was important for the Zhou elite from the predynastic through late Western Zhou periods.

In surveying the Late Shang world above, we commented on the evidence for a diverse population in the Wei River valley, with likely Shang, Zhou, and other (Qiang?) inhabitants. The finds in Zhouyuan are probably the best indicators of the location of the people known as Zhou at about the time of the conquest. Their continued presence is not in doubt. Pottery found at Zhouyuan matches pottery known from the areas of Feng and Hao, the early Western Zhou capital region near Xi'an, but the Zhouyuan architectural remains are better preserved than anything known to date from Feng Hao.²⁸ Since there is no positive evidence Zhouyuan supported a Shang outpost or colony, we conclude that here the Zhou adopted a sophisticated building technology from the Shang. The process seems straightforward: replication by the Zhou of methods devised by generations of Shang builders. This process has parallels in both script and bronze casting. The Zhouyuan oracle-bones are inscribed with the same logographs used by the Shang. Zhou bronzes follow norms established by Late Shang foundries at Anyang for the most common types, such as *ding* and *gui*. Any Shang presence in

the Wei River valley that could inspire these effects, however, is poorly known. There is some evidence at Qishan (an Erligang burial with bronzes, and Shang bronzes in later tombs), but more substantial data from Laoniupo east of Xi'an, with burials and a chariot pit.²⁹

Sanxingdui and Jinsha

Perhaps the most spectacular effect caused by interaction with the Shang culture of North China took place in the Sichuan basin, the Upper Yangzi macroregion. Many aspects of the culture now emerging through archaeological investigations centered on Guanghan County and Chengdu are decidedly alien. This culture grew from local roots, the Baodun Culture of the third millennium B.C.E.³⁰ At the Sanxingdui type site, this growth was literally upon a foundation level of that late Neolithic base. It yielded over time to another local culture, typified by the Shi'erqiao and Jinsha sites in Chengdu. Local developments in both periods were affected by the Shang, in particular by their technology of bronze casting. The Sanxingdui bronze images discussed below could not have been cast without that technical input, yet artistic debts otherwise are modest. Shang imagery and designs were coopted only in very limited ways. Shang ritual vessels themselves were employed sparingly, apparently only a few types and then seemingly for purposes unlike the North (see Figure 5.12). Thus the overall content of the Sanxingdui-Jinsha Culture as we understand it now was little affected by the Shang heritage from which its casting technology came. Distant from the Central Plains, the Sanxingdui-Jinsha Culture went its own way. This path is so different, based on present data, that it is not easily lumped into a general characterization of early "Chinese" culture.

The two pits opened in summer 1986 are among the richest finds ever reported for the period (Figure 5.17).³¹ They are also unlike any other contexts encountered in any part of China Proper. They were not burials, given a complete lack of human remains. They are also poor candidates as pits containing grave goods that sometimes accompany a high status tomb. Their current designation as sacrifice pits (*jisi keng*) is only partially apt. Something did indeed happen to a great many of the objects. They were broken and burned, but not *in* the pits, and they are accompanied by burned animal remains and ivory tusks. Perhaps these were offerings to nature spirits as has been suggested for deposits of bronze *nao* bells in the Middle Yangzi region. That view is supported to some degree by large numbers of cowries placed inside several bronze heads and vessels, analogous to practices of the South. But more than such offerings (sacrifices), the pits appear to hold furnishings stripped from ritual precincts (Table 5.1).

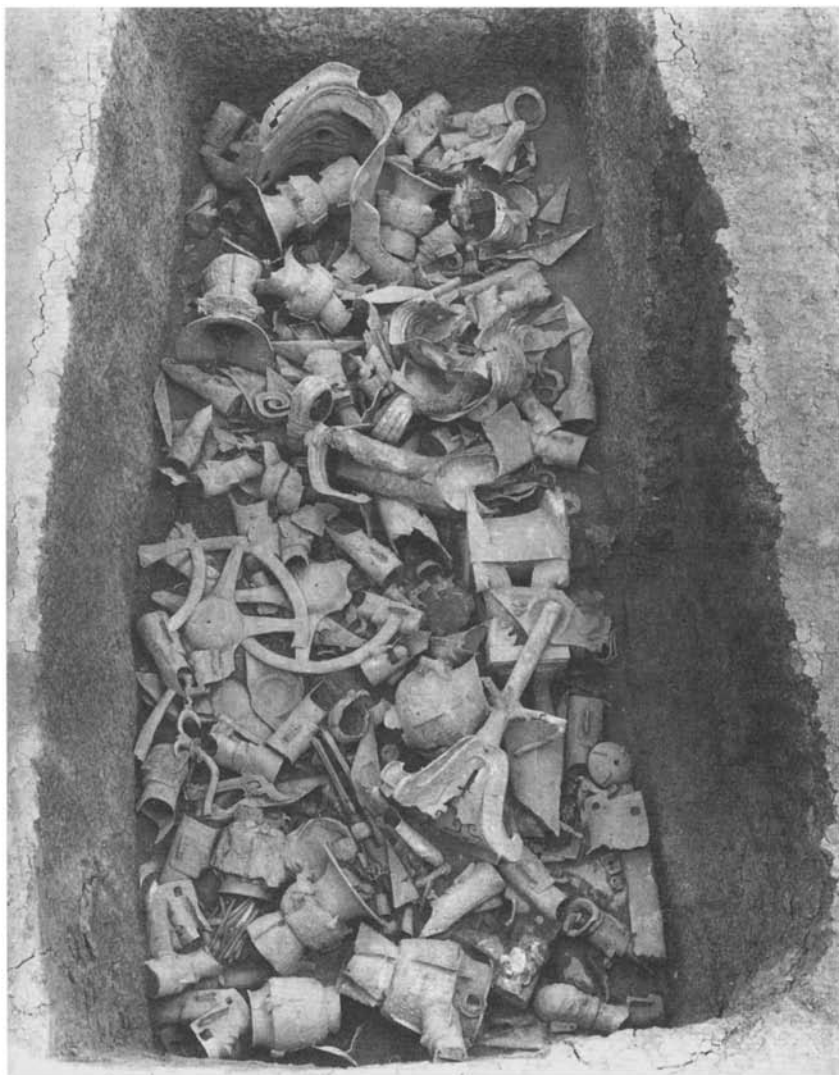


Figure 5.17. Excavation of pit 2, Sanxingdui, *Sanxingdui jisi keng* (1999), pl. 56.

How to explain such a large-scale disposal of ritual gear? Some writers believe the pits were filled when Sanxingdui was conquered by a hostile group. Others propose that some calamity befell the city, necessitating a wholesale stripping of its idols and temples. Another view proposes that a change in rulers required refurbishment. The slightly different dates proposed for the two pits would work against the idea of a conquest, and

TABLE 5.1. Contents of the Sanxingdui Pits

	<i>Pit 1</i>	<i>Pit 2</i>
<i>Bronze</i>	<i>T</i> = 178	<i>T</i> = 735
Heads	13: A3, B9, C1	44: A1, B37, C2 + 4
Figures	1	8
Masks	2	20
Dragons	5	Animal mask 3
Tiger	1	Animal plaque 9
		Eyes 109
		Trees 2
		Birds 13
Vessels		
<i>Zun</i>	2	<i>Zun</i> 6+
<i>Pou</i>	1	<i>Lei</i> 6
<i>Pan</i>	1	
Lid	1	
<i>Yuan</i>	74	58
Square <i>Bi</i>	33	25
<i>Ge</i>	44	17
		Bells 43
<i>Gold</i>	<i>T</i> = 4	<i>T</i> = 61
<i>Jade</i>	<i>T</i> = 129	<i>T</i> = 486
<i>Zhang</i>	48*	17
<i>Zong</i>	1	—
<i>Huan</i>	1	1
<i>Bi</i>	3	2
<i>Yuan</i>	2	7
<i>Ge</i>	18*	21
<i>Jian</i>	1	<i>Dao</i> 1
<i>Fu</i>	12	1
<i>Ben</i>	2	—
<i>Jin</i>	6	1
<i>Zao</i>	35	43
<i>Stone</i>	<i>T</i> = 70	<i>T</i> = 15
Mao	2	—
Chan	3	—
<i>Pottery</i>	39	—
<i>Ivory Tusks</i>	13	67
<i>Cowries</i>	124	4600

Source: Sichuan Institute of Archaeology, *Sanxingdui jisi keng* (1999).

the other two views are hard, probably impossible, to document from artifactual data alone. Moreover other discoveries, past and future, affect our interpretations. We already have preliminary reports of several more pits filled with jade and stone elsewhere at the site, although perhaps without first being broken or burned.

Most attention has focused on the anthropomorphic imagery found in the two pits. Pit 1 held thirteen bronze heads, in three variant types (Figure 5.18), while pit 2 added forty-four more of those same types, with gold foil covering the faces of four of them. The next most numerous item was masks (Figure 5.19), sheets of cast bronze sharing the physiognomy of the heads but lacking necks, backs, and tops. The one large-scale standing figure from pit 2 (Figure 5.20) establishes a context for these heads and masks. Comparing the heads with this figure, it seems possible that any or all might have been mounted to a body of some material other than bronze, and thus could have served as a part of large-format idols, icons, or effigies. The principal head type (with forty-eight examples) has a high forehead and flat cranium; two of these also have gold sheet masks. One example has a band with loops wrapped around the head, matching the head of the large standing figure. (One can imagine headbands of perishable material on the remaining heads.) The other two types differ only slightly in the shape of the heads. Whether or not these variations distinguished different identities remains an open question. The standing figure from pit 2 may be the only instance of a full-scale bronze rendering, but figures of this scale may have been common. One must then imagine a place in which such effigies would stand, and possibly a spectrum of identities for them.

The masks share the facial features of these heads. They clearly were made to be affixed to something quite large. They come in several sizes, one large example 40 cm tall, most 25 or 15 cm, respectively. In width they vary from 11 to 60 cm. If these were fittings over structural elements like columns and beams, those timbers were very thick. Their profusion, like the large number of possible standing figures suggested above, would have created a powerful effect in any space or structure by their sheer repetition. They may have been painted with red or black, or adorned with bronze fittings, of which a great many were found in pit 2.

Three masks are identified by the excavators as animals because of their more exaggerated features (Figure 5.21). All three have large pointed ears at right angles to the sides of their head; all have protruding pupils expelled from their eye sockets. Two masks of the same size have a fitting attached above the nose, while the third example has a slot but lacks any attachment. This is the largest of all the masks with a height of 66 cm and width of 138 cm. These three masks are the only

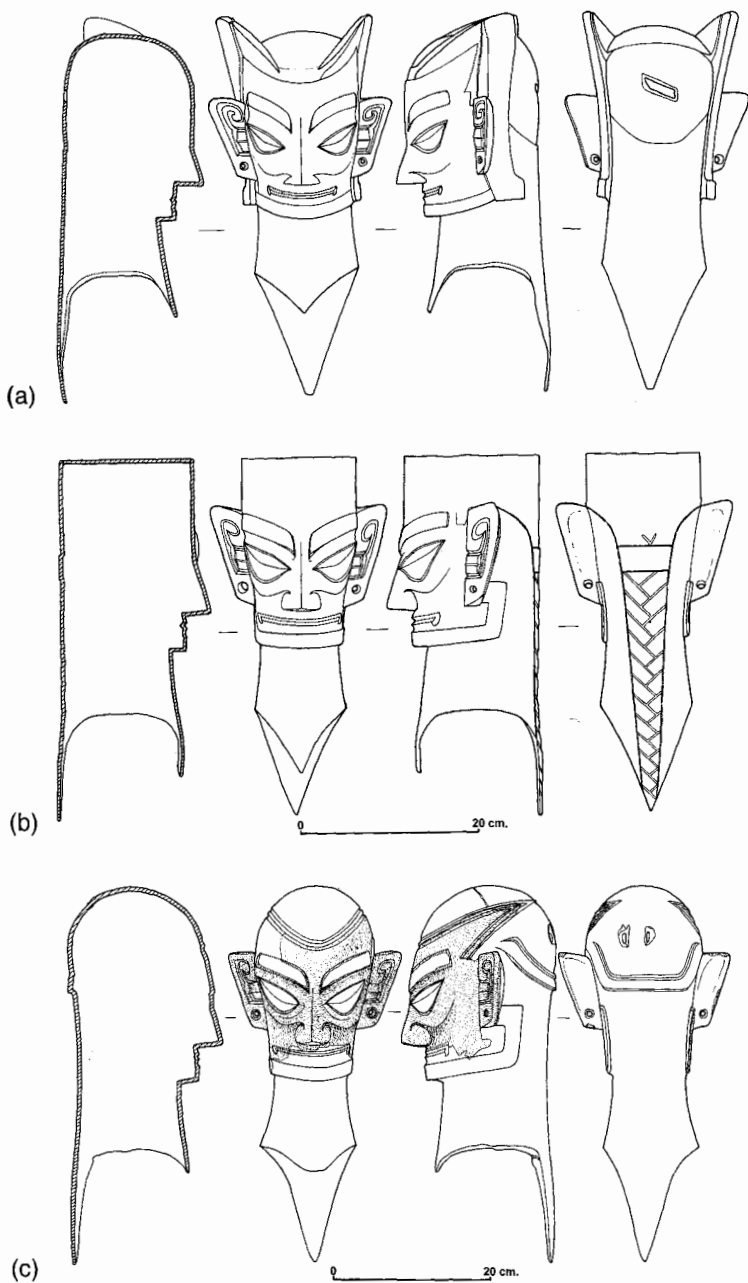


Figure 5.18. Bronze heads, pits 1 and 2, Sanxingdui: (a) K1:5, height 45.6 cm; (b) K2(2):51, height 40.4 cm; (c) K2(2):214, height 48.1 cm. *Sanxingdui jisi keng* (1999), pp. 29, 176, 184.

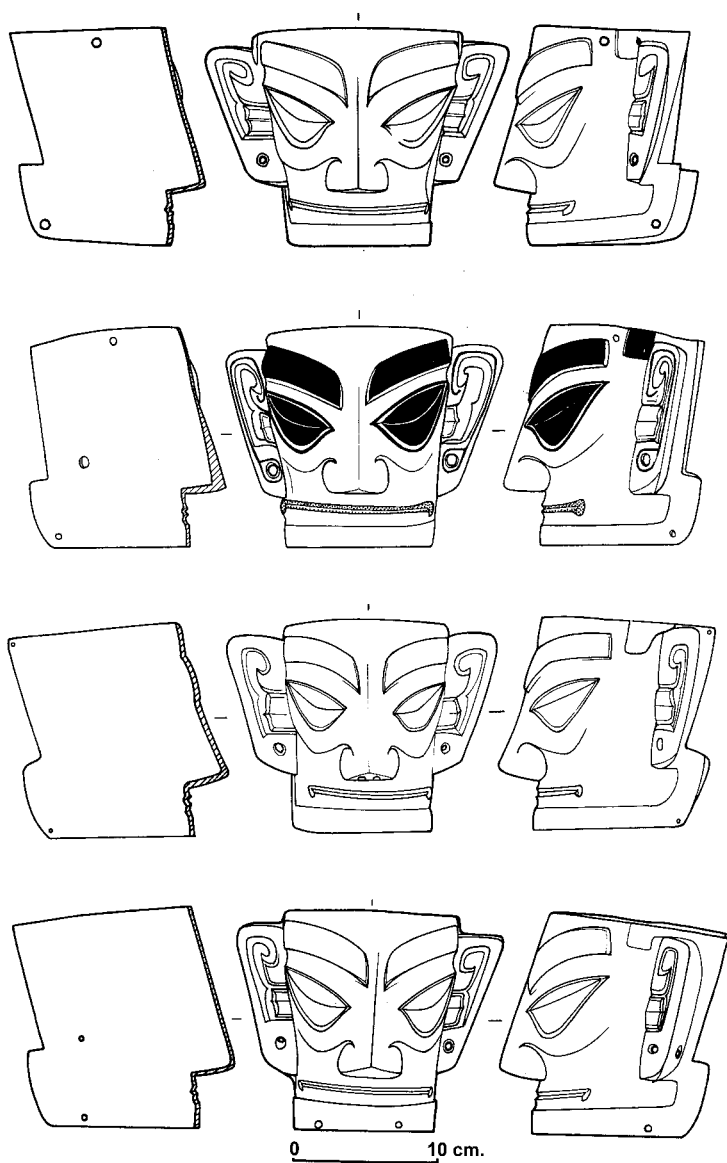


Figure 5.19. Bronze masks, pit 2, Sanxingdui, heights 15 cm, widths 20 cm.
Sanxingdui jisi heng (1999), p. 194.

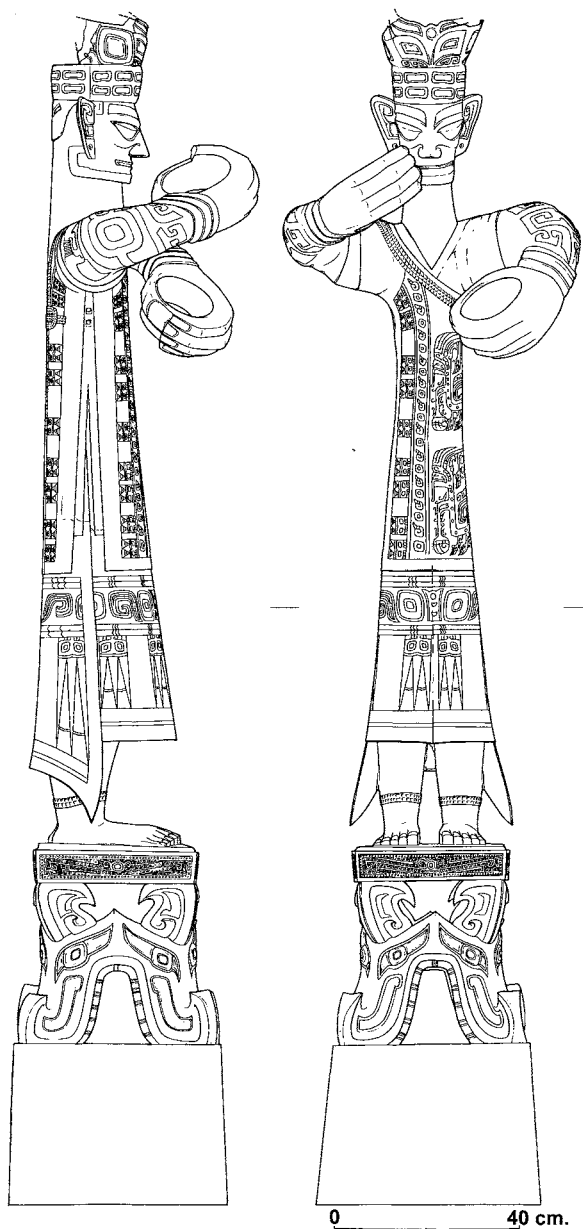


Figure 5.20. Bronze standing figure, pit 2, Sanxingdui, height 260 cm.
Sanxingdui jisi keng (1999), opposite p. 162.

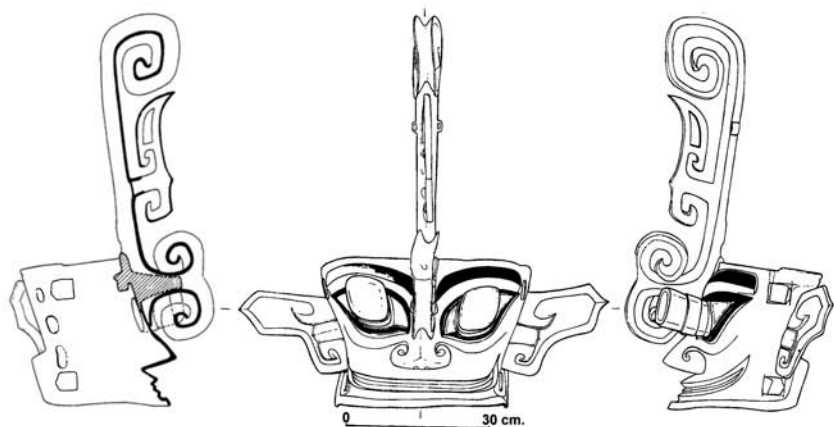


Figure 5.21. "Animal mask," pit 2, Sanxingdui, K2(2):142, height 82.5 cm. *Sanxingdui jisi keng* (1999), p. 197.

faces of any type (leaving aside a single atypical kneeling figure) that seem to have *open* eyes. The remainder have a ridge running side to side as if their lids were closed. Thus one might regard such faces as sleeping, blind, or dead. Are they blind shamans? Dead ancestors?

A number of small-scale figures are reported, several incomplete. Three kneeling figures affixed to a tree base share the facial features of the heads and masks. So too do an incomplete figure with a bizarre head-dress similar to the animal masks and another figure on a stand carrying a *zun* vessel on its head (Figure 5.22). This figure is bare chested with prominent nipples. If it is female, it would seem to be unique. It is explicitly shown in an offering pose, as is another miniature kneeling figure grasping a scepter in its extended hands. A variety of other motifs are found among other bronze objects: plaques reminiscent of Shang *taotie*; various dragons, tigers, birds, and snakes; and parts for many large-scale eyes (including some with protruding pupils) that could be affixed to other objects or surfaces.

Most puzzling of all are several complex objects that have required extensive reconstruction but remain incomplete even so. A large tree from pit 2 (Figure 5.23), almost 4 m in height as restored, has a trunk and nine branches, replete with petals, fruit, perching birds, and colored disks (*yuan*), bronze and stone forms found in some quantity in both pits. A second tree with a large trunk is much less complete and about half the height in its damaged state. Several other smaller trees are only partially restored. Many miscellaneous bells, dangles, and

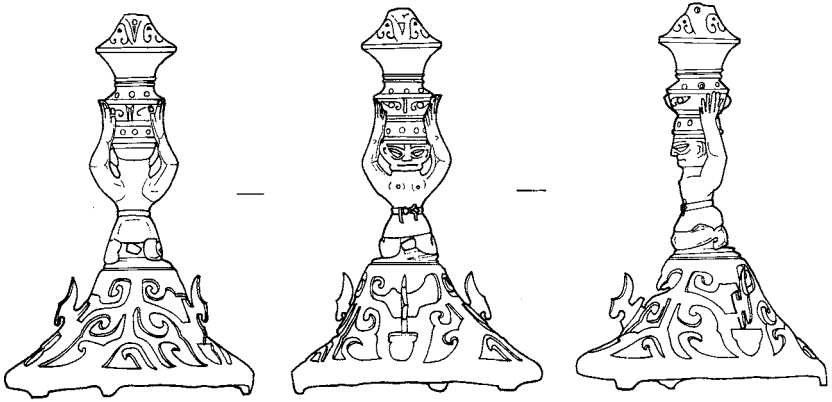


Figure 5.22. Female figure with offering vessel, pit 2, Sanxingdui, height 15.6 cm. *Sanxingdui jisi keng* (1999), p. 170.

attachments might have been a part of these several trees. Still more intriguing are several composite objects combining animals, figures, and other things in tiers (Figure 5.24). In this drawing, a hybrid beast carries a plinth with four standing figures that in turn support the base of a squared vessel, which itself incorporates figures, birds, and hybrid bird-humans. This subject matter has no real counterparts in the Shang designs of Henan. A few motifs that decorate the edges and backgrounds are quoted from Shang designs: squared spirals, whorls, single or paired eyes.

While the pits at Sanxingdui gained attention in the late 1980s, even more recent work in this region will demand concentrated study for many years to come. Excavations by the Chengdu City Institute of Cultural Relics and Archaeology in the late 1990s began to reveal a complex site in the city's western suburbs near Huangzhong village. Pottery, houses, kilns, pits, and graves (seldom furnished) were found between the Modi River and an ancient riverbed on the north in an area now defined by the second and third ring roads. In February 2001, construction at a site south of the Modi River brought local archaeologists back to the scene (Figure 5.25). There a bulldozer or backhoe had unintentionally dug into a rich deposit containing hundreds of items of gold, bronze, jade, and stone, some strongly reminiscent of artifacts from Sanxingdui, 40 km to the northeast. Construction was stopped and a thorough program of probing commenced. Chengdu archaeologists now believe they have located a huge site, some 3 sq km in area, straddling the Modi River. The nearby village of Jinsha has lent its name to

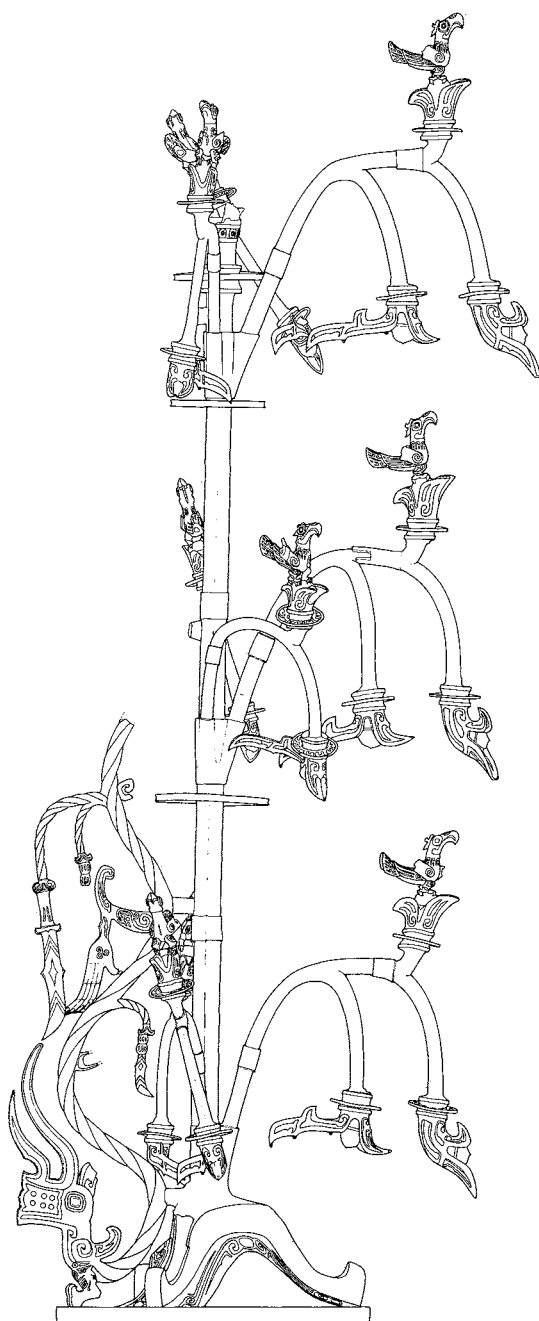


Figure 5.23. Nine-branch tree, pit 2, Sanxingdui, height 396 cm. *Sanxingdui jisi keng* (1999), opposite p. 218.

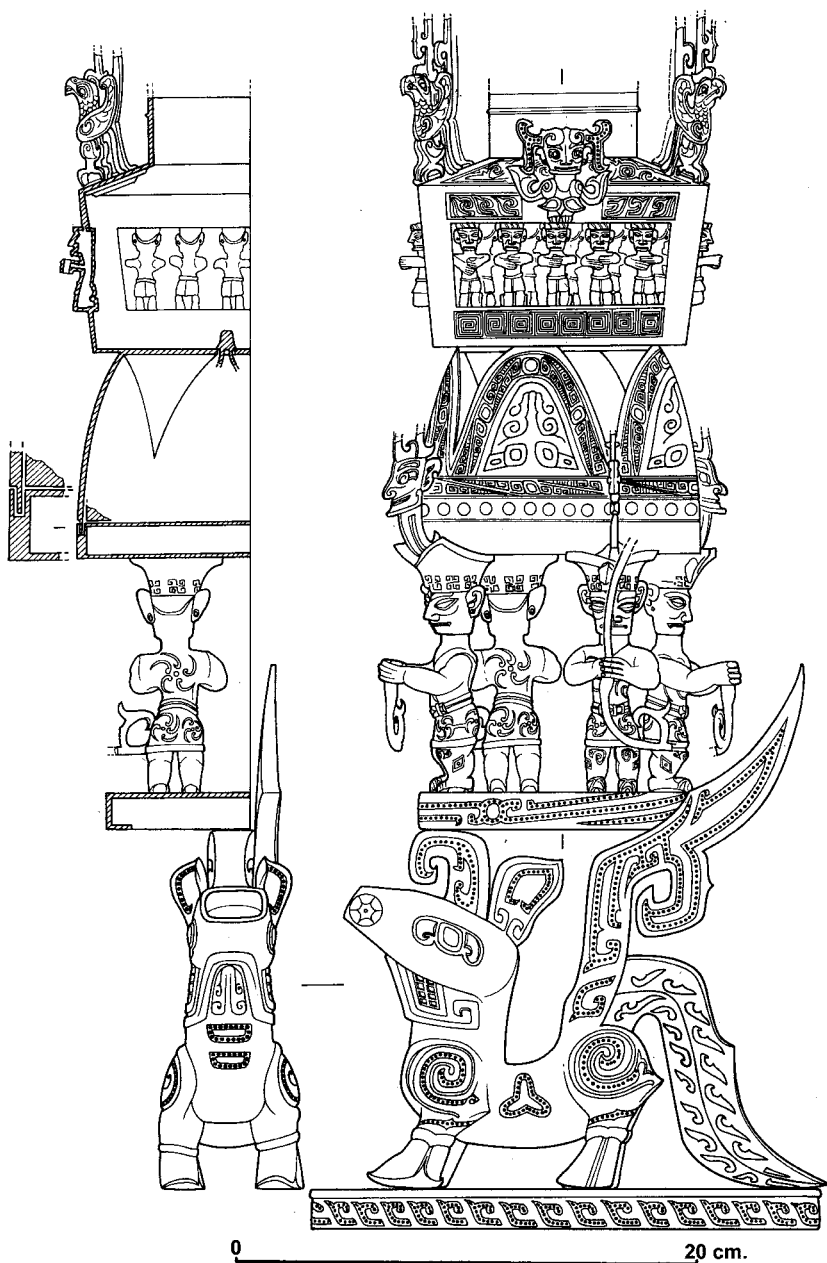


Figure 5.24. Unknown object, pit 2, Sanxingdui, height (incomplete), 53.3 cm. *Sanxingdui jisi keng* (1999), p. 233.

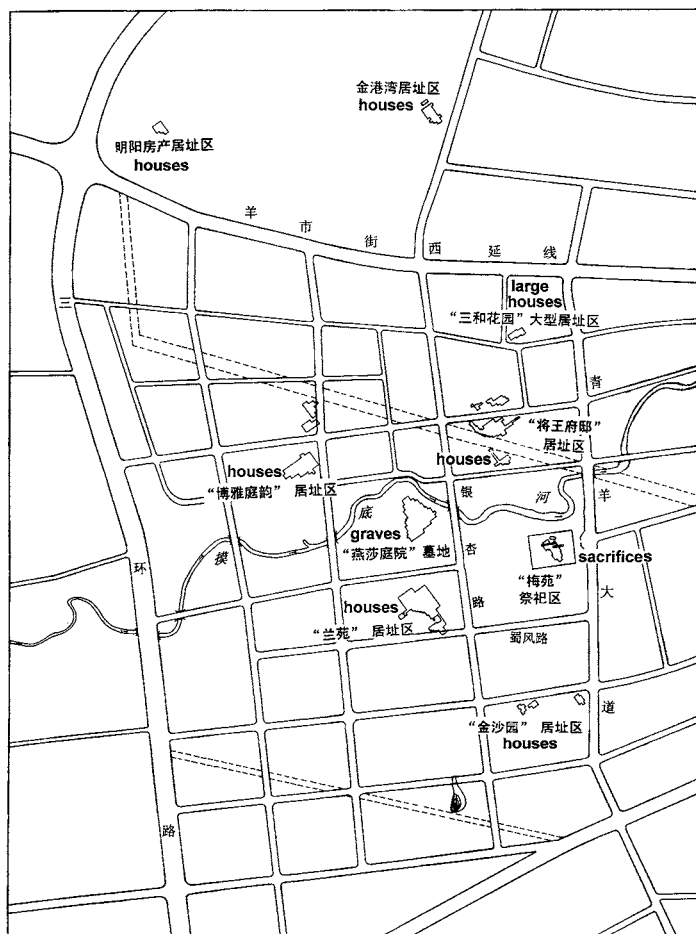


Figure 5.25. Site plan, Huangzhong and Jinsha, Chengdu. *Wenwu* 2004.4:5.

the site. Culturally, the finds at Jinsha and Huangzhong villages both align with the Shi'erqiao Culture (named for another site in the city), and all can be dated to the Late Shang and early Western Zhou periods, successors to Sanxingdui.³²

Work at Jinsha has been concentrated in three areas: Meiyuan, on the south bank of the Modi River, where the initial accidental discovery took place; Lanyuan, only 30 m further west, where extensive remains of houses, pits, and graves have been found; and the Athletic Park, north of the first two, known so far for houses and graves. Across the

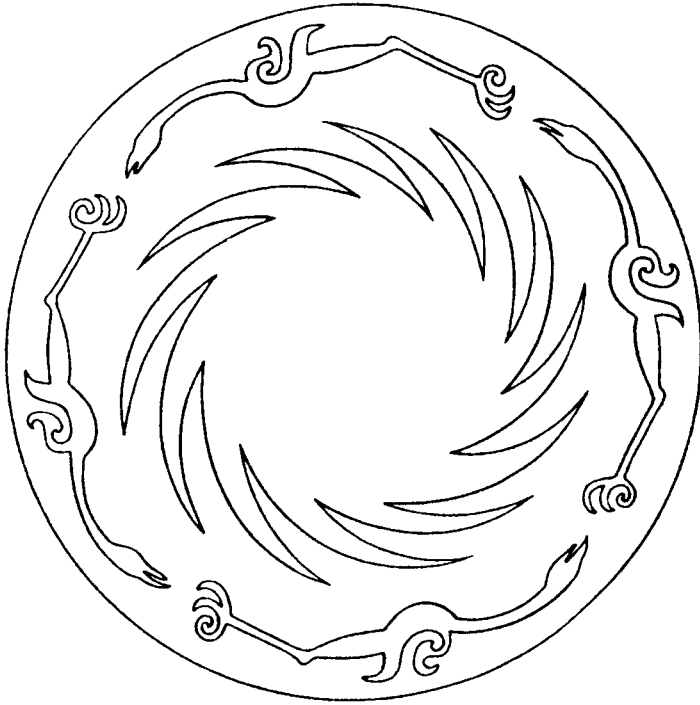


Figure 5.26. Gold sun disk, diameter 12.5 cm. *Wenwu* 2004.4:7.

river nearer to Huangzhong village are areas devoted to residential use, with some large-scale buildings. Features and artifacts from these several loci are consistent and suggest a large-scale settlement that developed over time, its residential and mortuary districts shifting during that occupation. Artifacts recovered include several dozen pieces of sheet gold (Figure 5.26). A facial mask and two strips of gold with incised designs closely parallel gold applied to bronze heads and the gold sheath for a staff from Sanxingdui. Many small items of bronze also echo finds at the former site: for example, a miniature standing figure (Figure 5.27), small bird, dragon, and eye elements that were attached to larger objects, as well as serrated *ge* weapons and collared disks. The Jinsha sites are to date the richest in jade objects of any from their period: collared disks and various so-called scepters and *ge* blades parallel finds in the two Sanxingdui pits. The true jadestone used for these items is identified as tremolite from a source in western Sichuan. In addition to all of the above categories, a considerable number of dimensional stone carvings were recovered: eight kneeling figures that



Figure 5.27. Bronze standing figure, height 19.6 cm. *Wenwu* 2004.4:16.

appear to be slaves or prisoners (Figure 5.28), as well as four tigers and four snakes. The stone is olivine, and several pieces have details added in pigment. Again some comparable material is known from the Sanxingdui site.

The early Bronze Age cultures of the Upper Yangzi are just beginning to come into focus. At least two major centers have now been located, although decades will be required to properly map and identify their features. While Sanxingdui has a major wall, the Jinsha-Huangzhong site cluster may not. Both were part of larger regional settlement hierarchies.

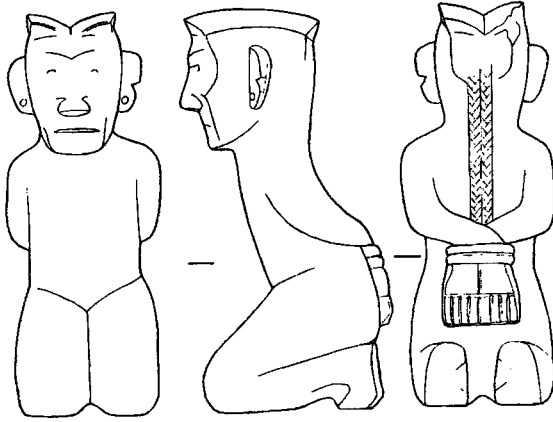


Figure 5.28. Stone kneeling figure, height 21 cm. *Wenwu* 2004.4:64.

The Baodun Culture that underlies Sanxingdui had at least a half-dozen walled settlements in the period prior to the occupation at Sanxingdui itself, and some may have continued to flourish. Likewise, the Jinsha sites are among a long expanse of sites crossing modern Chengdu, including Shi'erqiao. While the local roots of these cultures can now be attested, their connections with the wider world are equally intriguing. Although they exploited some of the same resources as their contemporaries down the Yangzi or in the North, their own identity nonetheless shines through.

Afterword

The Invention of Chinese Civilization

Throughout this book I have been at pains to qualify what I write. My efforts are more than an abundance of scholarly caution or a nod to contemporary academic fashion. As a non-Chinese researcher writing about the early Bronze Age, I am acutely aware that my assumptions are not the same as those of my Chinese peers. By choice I have placed information about the earliest historiographic traditions into a series of boxes labeled “Mythic Narratives” and “Myths of the Xia.” Following the good lead of other scholars (Robert Bagley, for one), I have tried to reserve the term “Shang” for naming the literate polity that flourished at Anyang in the last centuries of the second millennium B.C.E., rather than assume that antecedent and contemporaneous archaeological cultures were also Shang. So I write of the roots of the Shang in both the Erligang and Erlitou Cultures, respectively, without making any final judgments as to the specific ancestors of the Late Shang kings. So, too, I have characterized other cultures usually lumped under the broad rubric of “Shang civilization” as episodes in the early Bronze Age preceding or contemporary with the Shang. Thus, “Shang” is not an early synonym of “China,” and the latter awaits its invention in later periods.

In moving through the archaeological sequence from Erlitou to Yinxu, common features and linkages that show growth are emphasized in each chapter. From the perspective of material culture, there is considerable similarity between the elite of Erlitou and that of Yinxu, as well as between their respective commoner populations. (Writing, and the information it brings us, however, marks one major cleavage in this material record. The meager traces of literacy prior to Wu Ding c. 1250 set the stage for the eventual, inevitable discovery of its initial stages.) This story has two aspects: the growth of a culture over the second millennium B.C.E. from Erlitou to Yinxu, and the diverse impacts that culture had on its neighbors. In every case and in each period, the stories of the neighbors have only begun to come into focus, usually around a single

discovery or a few finds, with little by way of regional context. Surely every regional development we have encountered, from the settlements of the Lower Xiajiadian Culture (contemporary with Erlitou) to those of the Chengdu basin (contemporary with Yinxu), will eventually be fleshed out in all of their variety and complexity. Nonetheless, at the moment, no region can approach the quality and quantity of data now known from the key sites in Henan, which remain the focus of this book.

I have been watching these stories unfold since the 1970s, when I entered graduate school and began to read the archaeological journals month after month. To their credit, Chinese archaeologists have published most of their work in a timely way. This book could not have been written without new, formal reports of excavations at Erlitou, Zhengzhou, Panlongcheng, Xin'gan, and Sanxingdui that appeared in recent years. And to my knowledge, most finds of the 1950s through the 1990s have been exploited as appropriate: clues have been pursued, and small excavations have often become large ones. The richest sites have in fact become permanent excavations—Anyang, most obviously (see Box 12), but also Erlitou, Zhengzhou, Yanshi, Wucheng, Zhouyuan, Sanxingdui, and now Jinsha. The current generation of archaeologists in the field is in hot pursuit of many parts of the larger puzzles posed by every site. Even so, unexpected discoveries will also appear in the next decade, and will once again stretch our theories and challenge our imaginations. The discovery of a previously unknown large walled settlement literally under the feet of the Anyang Work Team in 1998 (see Box 13) should make us all realize that even the best-known sites are still not thoroughly understood.

All of this evidence is seen in China as a part of the long story of Chinese civilization. I would prefer to think of it as a two-part story, as noted above, each with different relationships to historic Chinese civilization. The sequence of Bronze Age cultures centered in Henan (the North China macroregion) yields over time to the historical narrative of the second historic early state, the Zhou. And once we enter that period, the first millennium B.C.E., we are confidently on the trajectory of the origins of Chinese civilization. As I see it, the latter was invented over the course of that period out of the intense interaction of the various states dominating the Yellow and Yangzi Rivers, especially the so-called Warring States of the fifth to the third centuries B.C.E. The episodes of the second millennium that make up my putative second story, developments in the regions contemporary with Shang and its predecessors, actually affect both the first story and the more complex processes of the Zhou period. Thus the regions affected one another more and less over both the early and late Bronze Age. In some cases contributions to that

later thing we call “China” took place early on. In other instances contributions were closer to the final chapter, the progress of Qin unification in the third century B.C.E. We are well advised to think of a world populated by diverse peoples and cultures up to Qin unification and the first iteration of a “China.” While the Shang and Zhou states existed within this world, they did not dominate all of its parts or account for all of its cultures.

Suggested Reading

These recommendations highlight the work of scholars writing in English. Chinese-language scholarship is introduced through notes at the end of each chapter.

Introduction

The best overall treatment of the lead-up to state-level societies remains Kwang-chih Chang, *The Archaeology of Ancient China*, 4th ed. (New Haven, Conn.: Yale University Press, 1986), ch. 5, "The Chinese Interaction Sphere and the Foundation of Civilization," pp. 234–94. More up-to-date, albeit brief treatments of several cultures will be found in Xiaoneng Yang, ed., *The Golden Age of Chinese Archaeology: Celebrated Discoveries from the People's Republic of China* (Washington, D.C.: National Gallery of Art, 1999).

Longshan Age. Two studies address walled sites and settlement patterns in North China: Anne P. Underhill, "Variation in Settlements During the Longshan Period of North China," *Asian Perspectives* 33, 2 (1994): 197–228, and Liu Li, "Settlement Patterns, Chiefdom Variability, and the Development of Early States in North China," *Journal of Anthropological Archaeology* 15 (1996), 237–88. On Shijiahe, see Zhang Chi and Okamura Hidenori, "Excavation of Cities: Shijiahe and Yinxiangcheng," in *Exploring China's Past: New Discoveries and Studies in Archaeology and Art*, ed. Roderick Whitfield and Wang Tao (London: Saffron, 1999), pp. 86–94. A recent summation is Xiaoneng Yang, "Urban Revolution in Late Pre-historic China," in *New Perspectives on China's Past: Chinese Archaeology in the Twentieth Century*, ed. Xiaoneng Yang (New Haven, Conn.: Yale University Press, 2004), vol. 1, pp. 98–143.

Underhill's "Pottery Production in Chiefdoms: The Longshan Period in Northern China," *World Archaeology* 23, 1 (1991): 12–27, and Li's "Mortuary Ritual and Social Hierarchy in the Longshan Culture," *Early China* 21 (1996): 1–46, assemble most of the available data on their respective topics with anthropological analysis.

The best overview of Liangzhu archaeology and jades is Sun Zhixin, "The Liangzhu Culture: Its Discovery and Its Jades," *Early China* 18 (1993): 1–40. See also Filippo Salviati, "Decorated Pottery and Jade Carving of the Liangzhu Culture," in *Exploring China's Past*, ed. Whitfield and Wang Tao, pp. 212–26. A path-breaking scientific study of jades including Liangzhu evidence is Wen Guang and Zhichun Jing, "Chinese Neolithic Jades: A Preliminary Geoarchaeological Study," *Geoarchaeology* 7 (1992): 251–75. Kwang-chih Chang grapples with the significance of ritual jades in "An Essay on *Cong*," *Orientalism* 20 (1989): 37–43. Another approach to these ritual objects will be found in Wu Hung, *Monumentality in Early Chinese Art and Architecture* (Stanford, Calif.: Stanford University Press, 1995), "Decoration and Emblem," pp. 28–44.

Chapter 1. Dawn of the Bronze Age: The Erlitou Culture

On the Three Dynasties Chronology Project, see the articles by both Chinese and international scholars in *Journal of East Asian Archaeology* 4 (2002). Early overviews of Erlitou are offered in Robert W. Bagley, "The Beginnings of the Bronze Age: The Erlitou Culture Period," in *The Great Bronze Age of China*, ed. Wen Fong (New York: Metropolitan Museum of Art, 1980), pp. 69–77 and entries nos. 1–3; Chang, *The Archaeology of Ancient China*, pp. 307–16; and Yin Wei-chang, "Reexamination of Erh-li-t'ou Culture," in *Studies of Shang Archaeology: Selected Papers from the International Conference on Shang Civilization*, ed. K. C. Chang (New Haven, Conn.: Yale University Press, 1986), pp. 1–13. A more complete treatment is Robert L. Thorp, "Erlitou and the Search for the Xia," *Early China* 16 (1991): 1–38.

Two experienced field archaeologists have published a superb study of the Erlitou (and Erligang) Cultures from the standpoint of contemporary anthropological theory; see Liu Li and Xingcan Chen, *State Formation in Early China*, Duckworth Debates in Archaeology (London: Duckworth, 2003).

Neighbors and Interaction. Gideon Shelach has produced the only extensive analysis of Erlitou in relation to any of its neighbors; see "Social Complexity in North China During the Early Bronze Age: A Comparative Study of the Erlitou and Lower Xiajiadian Cultures," *Asian Perspectives* 33, 2 (1994): 261–92. More on the Lower Xiajiadian Culture will be found in Guo Dashun's overview in *The Archaeology of North China: Beyond the Great Wall*, ed. Sarah Milledge Nelson (London: Routledge, 1995), pp. 147–81. A broad treatment of early evidence of metal is An Zhimin, "Some Problems Concerning China Early Copper and Bronze Artifacts," trans. Julia K. Murray, *Early China* 8 (1982–83): 53–75.

Louisa G. Fitzgerald Huber argues for distant sources for Erlitou metallurgy; see “Qijia and Erlitou: The Question of Contact with Distant Cultures, *Early China* 20 (1995): 17–68.

Search for the Xia. The textual traditions concerning Xia (Hsia) are considered in Herrlee G. Creel, “Was There a Hsia Dynasty? in *Studies in Early Chinese Culture*, First Series (Baltimore: Waverly Press, 1938), pp. 97–131. The best critical study of early myths is Anne Birrell, *Chinese Mythology: An Introduction* (Baltimore: Johns Hopkins University Press 1993); her renderings are cited in the several boxes devoted to Xia, Shang, and Zhou traditions.

Chapter 2. Foundations of the Bronze Age: The Erligang Culture

A Network of Sites. Supplementary texts for this chapter are Kwang-chih Chang, *Shang Civilization* (New Haven, Conn.: Yale University Press, 1980), ch. 5, “Cheng-chou,” pp. 263–88, and ch. 6, “Shang Archaeology Outside An-yang and Cheng-chou,” pp. 289–309. Chang’s synthetic account may be complemented by An Chin-huai, “The Shang City at Cheng-chou and Related Problems, in *Studies of Shang Archaeology*, ed. Chang, pp. 15–48. An attempt to place Zhengzhou in a broader theoretical and world context is Paul Wheatley, *The Pivot of the Four Quarters: A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City* (Edinburgh: Edinburgh University Press, 1971), pp. 31–36.

Reports on other sites include Jigen Tang, Zhichun Jing, and George (Rip) Rapp, “The Largest Walled Shang City in Anyang, China, *Antiquity* 74 (2000): 479–80, and Robert W. Bagley, “P’an-lung-ch’eng: A Shang City in Hubei, *Artibus Asiae* 39 (1977): 165–213.

Technologies of Power and Prestige. Studies of Erligang bronzes started with Alexander C. Soper, “Early, Middle and Late Shang: A Note,” *Artibus Asiae* 28 (1966): 5–38. See also Bagley, “P’an-lung-ch’eng.” Robert L. Thorp, “The Growth of Early Shang Civilization: New Data from Ritual Vessels,” *Harvard Journal of Asiatic Studies* 45 (1985): 7–75, is still the most thorough study to date. Wu Hung’s *Monumentality in Early Chinese Art and Architecture*, “From Imitation to Synthesis,” pp. 44–48, takes an alternative approach to all the above. Stimulating general remarks on casting will be found in Ursula M. Franklin, “On Bronze and Other Metals in Early China,” in *The Origins of Chinese Civilization*, ed. David N. Keightley (Berkeley: University of California Press, 1983), pp. 279–96, and the same author’s “The Beginnings of Metallurgy in China: A Comparative Approach,” in *The Great Bronze Age of China: A Symposium*, ed. George Kuwayama (Los Angeles: Los Angeles County Museum of Art, 1983), pp. 94–99.

Hybrid Culture in Jiangxi. Peng Shifan, "A Study of the Dayangzhou Discovery," in *New Perspectives on China's Past*, ed. Xiaoneng Yang, vol. 1, pp. 216–33, offers the perspectives of the principal excavator. A more thorough discussion of Dayangzhou is Robert W. Bagley, "An Early Bronze Age Tomb in Jiangxi Province," *Orientalions* (July, 1993): 20–36; see also entries in *The Golden Age of Chinese Archaeology*, ed. Xiaoneng Yang, "The Tomb at Dayangzhou, Xin'gan, Jiangxi Province," pp. 187–205. Sarah Allan discusses the motifs of bronzes in "The Tiger, the South, and Loehr Style III," in Department of Archaeology, Peking University, *Proceedings of the International Conference on "Chinese Archaeology Enters the 21st Century"* (Beijing: Science Press, 1998), pp. 149–82.

Chapter 3. The Shang Kings at Anyang

Firsthand accounts of the prewar excavations will be found in Herrlee Glessner Creel, *The Birth of China: A Study of the Formative Period of Chinese Civilization* (New York: Reynal and Hitchcock, 1937), and Li Chi, *Anyang* (Seattle: University of Washington Press, 1977). Creel conveys the thrill of discovery as the excavations hit their stride. Li's account is retrospective, but gives some sense of how perceptions changed during the campaigns and after.

The most thorough treatment of all topics related to Anyang is Kwang-chih Chang's *Shang Civilization*, ch. 1–4. Chang's vision of the site is largely that of the prewar excavators. His treatments of natural resources, the state, and society are each major contributions. See also David N. Keightley, "Shang China Is Coming of Age—A Review Article," *Journal of Asian Studies* 41, 3 (May 1982): 549–57. More up-to-date is Robert Bagley, "Shang Archaeology," and David N. Keightley, "The Shang: China First Historical Dynasty," in *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, ed. Michael Loewe and Edward L. Shaughnessy (Cambridge: Cambridge University Press, 1999), pp. 180–208, and pp. 232–91. Chang's *Shang Civilization* nonetheless introduces many topics that Bagley and Keightley do not touch.

Paul Wheatley's *The Pivot of the Four Quarters*, pp. 31–36 puts Yinxu into a context of the rise of urbanism. Another review by Keightley is informative: "Religion and the Rise of Urbanism," *Journal of the American Oriental Society* 93, 4 (1973): 527–38. Keightley's own mature ruminations on Anyang and the *longue durée* appeared as *The Ancestral Landscape: Time, Space, and Community in Late Shang China (ca. 1200–1045 B.C.)*, China Research Monograph 53 (Berkeley: Institute of East Asian Studies, 2000).

On jade at Anyang, see Hsia Nai, "The Classification, Nomenclature, and Usage of Shang Dynasty Jades," in *Studies of Shang Archaeology*, ed. Chang, pp. 207–36.

On bronze, see W. T. Chase, "Bronze Casting in China: A Short Technical History," in *The Great Bronze Age*, ed. Kuyayama, pp. 100–123, and the introduction to Chase, *Ancient Chinese Bronze Art: Casting the Precious Sacral Vessel* (New York: China Institute, 1991), pp. 21–38.

Edward L. Shaughnessy, "Historical Perspectives on the Introduction of the Chariot into China," *Harvard Journal of Asiatic Studies* 48, 1 (1988): 189–237, tackles this question from the point of view of ancient graphs, inscriptions, rock art, and archaeological data. Two more recent treatments are: Anthony J. Barbieri-Low, "Wheeled Vehicles in the Chinese Bronze Age (c.2000–741 B.C.)," *Sino-Platonic Papers* 99 (February, 2000): i–v, 1–98, and, with due consideration of philological evidence, Victor H. Mair, "The Horse in Late Prehistoric China: Wrestling Culture and Control from the 'Barbarians,'" in *Prehistoric Steppe Adaptation and the Horse*, ed. Marsha Levine, Colin Renfrew, and Katherine V. Boyle (Cambridge: McDonald Institute for Archaeological Research, 2003), pp. 163–87.

Chapter 4. Shang Cult: Divination and Sacrifice

The key works on oracle-bone inscriptions for English readers are from David N. Keightley of the University of California, Berkeley. His *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* (Berkeley: University of California Press, 1978) remains the standard guide to the subject and has taught the ropes to several generations of aspiring oracle-bone scholars, including this one. Keightley views of the Late Shang cult and especially its manifold impact on Shang culture more broadly are laid out in several articles: (1) "The Religious Commitment: Shang Theology and the Genesis of Chinese Political Culture," *History of Religions* 17 (1978): 211–25; (2) "Late Shang Divination: The Magico-Religious Legacy," *Journal of the American Academy of Religion Thematic Studies* 50, 2 (1984): 11–34; (3) "Shang Divination and Metaphysics," *Philosophy East and West* 38 (1988): 367–97. Read as a coherent body of work, Keightley's contributions have re-invented the Shang; my debts to him are found everywhere in this book.

Two selections of oracle-bone inscriptions are available in English translation: (1) David N. Keightley, "The Oracle-bone Inscriptions of the Late Shang Dynasty," in *Sources of Chinese Tradition*, vol. 1, 2nd ed., ed. William Theodore deBary and Irene Bloom (New York: Columbia University Press, 1999), pp. 3–23, and Robert Eno, "Deities and Ancestors in Early Oracle Inscriptions," in *Religions of China in Practice*, ed. Donald Lopez (Princeton, N.J.: Princeton University Press, 1996), pp. 41–51. Robert Eno, "Was There a High God *Ti* in Shang Religion?" *Early China* 15 (1990): 1–26, is a stimulating excursion into the topic.

On Shang cult, see also K.C. Chang, *Art, Myth, and Ritual: The Path to Political Authority in Ancient China* (Cambridge, Mass.: Harvard University Press, 1983); and "Shang Shamans," in *The Power of Culture: Studies in Chinese Cultural History*, ed. W. J. Peterson (Hong Kong: Chinese University Press, 1994), pp. 10–36. Chang interpretation of the cult as shamanistic differs fundamentally from Keightley, but has the heuristic virtue of tying Late Shang to larger patterns in prehistoric cultures and world archaeology. Victor H. Mair, "Old Sinitic **myag*, Old Persian *magus*, and English Magician," *Early China* 15 (1990), 27–47 offers a variety of evidence for rendering *wu* as "mage" instead of "shaman."

For overviews of Shang burials, see Yang Hsi-chang [Yang Xizhang], "The Shang Dynasty Cemetery System," in *Studies of Shang Archaeology*, ed. Chang, pp. 49–63, and Tang Jigen, "The Burial Ritual of the Shang Dynasty: A Reconstruction," in *Exploring China's Past*, ed. Whitfield and Wang Tao, pp. 173–81. Elizabeth Childs-Johnson, "The *Jue* and Its Ceremonial Use in the Ancestor Cult of China," *Artibus Asiae* 48, 3–4 (1987): 171–96, is a rare study of the material culture of Shang ritual.

For casting Late Shang bronzes, see Robert W. Bagley, "Shang Ritual Bronzes: Casting Technique and Vessel Design," *Archives of Asian Art* 43 (1990): 6–20; a more exhaustive discussion of many major types comprises his introduction to *Shang Ritual Bronzes in the Arthur M. Sackler Collections* (Cambridge, Mass.: Arthur M. Sackler Museum and Harvard University Press, 1987). Bagley's essay and entries make frequent references to excavated Late Shang bronzes and are rich in illustrations. For an overview of excavated vessels from Yinxu, see Robert L. Thorp, "The Archaeology of Style at Anyang: Tomb 5 in Context," *Archives of Asian Art* 41 (1988): 47–69. Two more specialized essays are also recommended: Louisa G. F. Huber, "Some Anyang Royal Bronzes: Remarks on Shang Bronze Decor," in *The Great Bronze Age*, ed. Kuyayama, pp. 16–43, and Cheng Chen-hsiang (Zheng Zhenxiang), "A Study of Bronzes with the 'Ssu T'u Mu' Inscriptions Excavated from the Fu Hao Tomb," in *Studies of Shang Archaeology*, ed. Chang, p. 81–102.

On the general significance of ritual bronzes, including decoration and inscriptions, see Wu Hung, "Metamorphosis of Decoration" and "The Triumph of Words," in *Monumentality in Early Chinese Art and Architecture*, pp. 48–63. The most extensive treatment of symbolic content is Sarah Allan, *The Shape of the Turtle: Myth, Art, and Cosmos in Early China* (Albany: State University of New York Press, 1991); see also Allan's "The Tiger, the South, and Loehr Style III." Roderick Whitfield, ed., *The Problem of Meaning in Early Chinese Ritual Bronzes* (London: Percival David Foundation, 1993) offers several essays debating Allan's ideas, including a dissenting view by Bagley, "Meaning and Explanation," pp. 34–55 best read with Allan's response, pp. 161–76. See also Ch. 4 of Chang's *Art*,

Myth, and Ritual. Ladislav Kesner reviews competing approaches in “The Taotie Reconsidered: Meanings and Functions of Shang Theriomorphic Imagery,” *Artibus Asiae* 51 (1991): 29–53.

Chapter 5. The Late Shang World

David N. Keightley, “The Late Shang State: When, Where, and What,” in Keightley, *Origins of Chinese Civilization*, pp. 523–64, is the best introduction to the geography of this period. K. C. Chang’s chapters on “Natural and Economic Resources” and “Economy and Political Order of the State,” in Chang, *Shang Civilization*, 136–57, 210–59, are also valuable. Edward L. Shaughnessy, “The Extent of the Earliest Chinese Kingdoms,” *Asia Major* 2, 2 (1989): 1–22, offers a critique of methods underlying studies of historical geography and reviews in particular the evidence for the location of Zhou. Shaughnessy, “Western Zhou History” and Jessica Rawson, “Western Zhou Archaeology,” both in *Cambridge History of Ancient China* (1999), pp. 292–351, 352–449 respectively, offer introductions to the end of Shang and following period.

On the peoples and material culture of the Northern Zone, see Jenny F. So and Emma C. Bunker, *Traders and Raiders on China’s Northern Frontier* (Seattle: University of Washington Press, 1995), esp. pp. 32–39. Lin Yun, “A Reexamination of the Relationship Between Bronzes of the Shang Culture and of the Northern Zone,” and Gao Zhixi, “An Introduction to Shang and Chou Bronze *Nao* Excavated in South China,” both in *Studies in Shang Archaeology*, ed. Chang, are also useful. Robert Bagley discusses the Middle Yangzi region in his *Shang Ritual Bronzes*, pp. 32–36. Lothar von Falkenhausen, *Suspended Music: Chime-Bells in the Culture of Bronze Age China* (Berkeley: University of California Press, 1993), “The *Nao* Bells of Southern China,” pp. 138–57, expands on Gao’s treatment cited above.

Robert L. Thorp, “Origins of Chinese Architectural Style: The Earliest Plans and Building Types,” *Archives of Asian Art* 36 (1983): 26–31, discusses the complex at Fengchu.

Robert W. Bagley, ed., *Ancient Sichuan: Treasures from a Lost Civilization* (Seattle: University of Washington Press, 2001) is a thorough introduction to the finds at Sanxingdui, as well as the later culture history of this remarkable region.

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Notes

Preface

1 See “Summary of the Comments on the Catalogue from the Committee for the Preparation of Exhibitions of Archaeological Relics, People’s Republic of China,” in *The Great Bronze Age of China*, ed. Wen Fong (New York: Metropolitan Museum of Art, 1980), 374–76.

2 A recent exhibition makes this point; see Yang Xiaoneng, ed., *The Golden Age of Chinese Archaeology: Celebrated Discoveries from the People’s Republic of China* (Washington, D.C.: National Gallery of Art, 1999).

3 See M. Loewe and E. Shaughnessy, eds., *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* (Cambridge: Cambridge University Press, 1999) for excellent essays by Robert W. Bagley and David N. Keightley.

Introduction

1 A recent overview in Chinese is Ren Shinan and Wu Yaoli, *KG* 1999.9; see also *Zhonghua renmin gonghe guo zhongda kaogu faxian* (1999), pp. 41–127.

Kwang-chih Chang, *The Archaeology of Ancient China*, 4th ed. (New Haven, Conn.: Yale University Press, 1986), remains the best introduction in English; see ch. 5, “The Chinese Interaction Sphere and the Foundation of Civilization,” pp. 234–94.

2 The phrase was first promoted by Yan Wenming; see “Longshan wenhua he shidai,” in *Shiqian kaogu lunji* (1998) (first published 1981).

3 Initial results have appeared for the Liangchengzhen area of coastal Rizhao, Shandong (*KG* 2002.5); for drainages southeast of Chifeng, Inner Mongolia (*KG* 2003.5 and 2004.9), and for the Yi-Luo River drainage near Gongyi, Henan (*KX* 2003.2). See also Chifeng International Collaborative Archaeological Research Project, *Neimenggu dongbu (Chifeng) chuyu kaogu diaocha jieduanxing baogao* (2003) for a methodological introduction to such regional surveys.

4 *KG* 1998.1. On Shandong, see also Zhang Xuehai, *WW* 1996.12; for the Middle Yangzi, see Zhang Xuqiu, *KG* 1994.7. A substantial monograph evaluating the Yangzi drainage has also appeared: Zhang Chi, *Changjiang zhong-xia you dichu shiqian juluo yanjiu* (2003), based on the author’s dissertation research.

5 We eagerly await the formal report of this major site; see Chang, *Archaeology of Ancient China*, pp. 275–77. Reports have appeared in *KG* 1980.1, 1983.1, 1984.12, 1986.9, 2003.3, 2003.9, 2004.2, 2004.7, with evidence from the Xiajin

site in WW 1998.12 and KX 1999.4. Work on the walls is summarized in *Gudai wenming yanjiu tongxun*, no. 3 (2002): 60–63, and no. 5 (2003): 40–49.

6 See the reports in WW 1990.8, 1994.4, and KX 1994.2; Shijiahe Archaeology Team, *Xiaojiawuji: Tianmen Shijiahe kaogu baogao zhi yi* (1999), was the first monograph in print. The Dengjiawan site is also now reported: Hubei Institute of Cultural Relics and Archaeology et al., *Dengjiawan: Tianmen Shijiahe kaogu baogao zhi er* (2003).

Chapter 1. Dawn of the Bronze Age: The Erlitou Culture

1 For an introduction to the issues and data (up to 1991), see this author's "Erlitou and the Search for the Xia," *Early China* 16 (1991): 1–38. The formal report summarizes all data to 1978: see Institute of Archaeology, *Yanshi Erlitou: 1959 nian–1978 nian kaogu fajue baogao*, Kaoguxue zhuanke Series D, no. 59 (1999).

2 See the following: KG 1983.3; 1984.1; 1984.7; 1985.12; 1986.4; 1991.12; 1992.4.

3 See preliminary notices in *Gudai wenming yanjiu tongxun*, no. 1 (2001): 32–34; no. 5 (2003): 50–53; and KG 2002.11. The Institute's Web site also posts notices; see below, note 8.

4 Zhongguo kaogu xuehui, ed., *Zhongguo kaoguxue nianjian* (annual 1984–present); see 1986: 146, and 1993: 173. Three much smaller pounded-earth foundations dated to period III are described in the formal report: (1) Two in Zone III north of Gedangtuo are incomplete (8.5 × 4 m and 19 × 4.5 m, respectively) with traces of post holes and wall footings. (2) Another incomplete foundation in Zone V just 60 m north of Palace No. 1 measures 14 × 7.3 m. It has internal features that set it apart from ordinary houses.

5 Bernhard Karlgren, *The Book of Documents* (Stockholm: Museum of Far Eastern Antiquities, 1950), p. 20.

6 David N. Keightley, "Religion and the Rise of Urbanism," *Journal of the American Oriental Society* 93.4 (1973): 527–38.

7 See my "Origins of Chinese Architectural Style: The Earliest Plans and Building Types," *Archives of Asian Art* 36 (1983): 22–39.

8 See the Institute of Archaeology's Web site: *Zhongguo Kaogu* [Chinese Archaeology], at <http://www.archaeology.net.cn/>. KG 2004.11 publishes preliminary work on the palace walls and roads as well as foundation no. 4.

9 Zhongguo kaogu xuehui, *Zhongguo kaoguxue nianjian*; see 1984: 128–29, and 1985: 163.

10 A recent notice in the *Gudai wenming yanjiu tongxun*, no. 5 (2003): 51–52, reports five "medium-scale" tombs within the yards of compound F3 (underneath Palace No. 2), with a variety of rich grave goods; the tombs are dated to period II.

11 Luoyang Cultural Relics Work Team, *Luoyang Zaojiaoshu—1992–1993 nian Luoyang Zaojiaoshu Erlitou wenhua juluo yizhi fajue baogao* (2002).

12 The Yi-Luo Archaeological Survey has combed parts of this drainage in recent years; see KX 2003.2. See also their Web site: <http://www.latrobe.edu.au/archaeology/research/survey/>.

13 Henan Cultural Relics Institute and Chinese History Museum, *Dengfeng Wangchenggang yu Yangcheng* (1992).

14 WW 1983.3. For the newly discovered wall at Dashigu, Xingyang near Zhengzhou, see WW 2004.11.

15 Paul Wheatley, *The Pivot of the Four Quarters: A Preliminary Inquiry into the Origins and Character of the Ancient Chinese City* (Edinburgh: Edinburgh University Press, 1971), see esp. pp. 225–330. For reasons unstated, Wheatley does not actually discuss the Erlitou site, although preliminary data were available when he wrote.

16 An extended presentation of Erlitou pottery is Zheng Guang's album: Institute of Archaeology, *Erlitou taoqi jicui*, Kaoguxue zhuanke Series B, no. 30 (1995).

17 Jin Zhengyao, WW 2000.1.

18 Lothar von Falkenhausen, *Suspended Music: Chime-Bells in the Culture of Bronze Age China* (Berkeley: University of California Press, 1993), p. 134.

19 Max Loehr, *Relics of Ancient China from the Collection of Dr. Paul Singer* (New York: Asia Society, 1965), no. 19; Robert J. Poor, *Ancient Chinese Bronzes, Ceramics, and Jade in the Collection of the Honolulu Academy of Arts* (Honolulu: Honolulu Academy of Arts, 1979), no. 13. Loehr also cites two examples in the Winthrop Collection, Harvard University Art Museums. See Chapter 5 for examples from Sanxingdui.

Wang Qing surveys some sixteen examples, including several of those above in WW2004.5.

20 KG 2002.11. Compare a similar blade from the Zijingshan casting site at Zhengzhou; *Zhengzhou Shang cheng* (2001), p. 381 and pl. 64.

21 Xu Guangji, in *Zhongguo kaoguxue yanjiu* 1 (1986), pp. 82–93; KG 1998.92; the Chifeng survey has also initiated studies in this region, see KG 2003.5.

22 Jenny F. So, "Jade and Stone at Sanxingdui," in *Ancient Sichuan: Treasures from a Lost Civilization*, ed. Robert W. Bagley (Seattle: Seattle Art Museum and Princeton, N.J.: Princeton University Press, 2001), pp. 152–75; compare the comments of Jay Xu in the same volume, p. 33.

Wang Yongpo's studies, KX 1996.1 and 2002.2, offer a comprehensive review of these artifacts and relevant issues.

23 Shijiahe Archaeology Team, *Xiaojiaiwuji* (1999), pp. 314–36.

24 An Zhimin, KG 1993.129; Sun Shuyun and Han Rubin, WW 1997.6.

25 Li Shuicheng, in *Kaoguxue wenhua lunji* 3 (1993), pp. 80–121.

26 See Louisa Fitzgerald Huber, "Qijia and Erlitou: The Question of Contact with Distant Cultures," *Early China* 20 (1995): 17–68.

27 Institute of Archaeology, *Dadianzi: Xiajiadian xiaceng wenhua yizhi yu mudi fajue baogao*, Kaoguxue zhuanke Series D, no. 48 (1996), pp. 81–85. For a review, see Yan Wenming, KG 1999.10.

Chapter 2. Foundation of the Bronze Age: The Erligang Culture

1 The Zhengzhou sites are well presented in Kwang-chih, Chang, *Shang Civilization* (New Haven, Conn.: Yale University Press, 1980), pp. 263–88. The detailed report of the wall is Henan Museum, WZC 1 (1977). Henan Institute of Cultural Relics and Archaeology, *Zhengzhou Shang cheng: 1953–1985 nian kaogu fajue baogao* (2001), 3 vols., is a definitive report of all work at Zhengzhou from the years noted. The outer wall was first treated by Song Guoding in *Zhengzhou Shang cheng kaogu xin faxian yu yanjiu, 1985–1992* (Zhengzhou, 1993), pp. 48–59. A more thorough report appears in KG 2004.3; we follow the latter.

2 KG 2004.3, discussion by Yuan Guangkuo and Zeng Xiaomin, pp. 59–67.

3 The Yanshi walled site is reported in a series of articles in KG: 1984.6, 1984.10 (west gate), 1985.4 (palace J1D4), 1988.2 (palace J1D5), 1995.11 (compound 2), 1998.6 (northeast corner), 1999.2 (small wall, dating, Zone VI excavations),

2000.7 (ditch in palace), 2002.7 (sacrificial tracts). A good overview tracking evolving perceptions is Wang Xuerong, in *Qiusihiji* (1996), pp. 286–307. Du Jin-peng and Wang Xuerong, *Yanshi Shang cheng yizhi yanjiu* (2004) reprint the reports above and many other articles as well.

4 See the analysis of Gao Wei et al., *KG* 1998.10.

5 Hubei Institute of Cultural Relics and Archaeology, *Panlongcheng: 1963–1994 nian kaogu fajue baogao* (2001). This reports supercedes earlier notices, especially *WW* 1976.1 and 1976.2.

6 Institute of Archaeology et al., *Xiaxian Dongxiafeng Kaoguxue zhuankan Series D*, no. 35 (1988). For the cave dwellings, see Hu Jianying and Zhang Xiaoguang, in *Kaoguxue wenhua lunji* 3 (1993), pp. 335–70.

7 History Museum et al., *Yuanqu Shang cheng: 1985–1986 niandu kancha baogao* (1996). Reviewed by Cao Bingwu in *WW* 1997.12. For the 1988–89 excavations, see *WW* 1997.10 and for 1991–92 excavations, *WW* 1997.12.

8 *KX* 2000.4.

9 Hebei Cultural Relics Institute, *Gaocheng Taixi Shangdai yizhi* (1985). For a review, see *KG* 1987.11 and Yang Xizhang's reanalysis in Institute of Archaeology, *Zhongguo kaoguxue luncong* (1993), pp. 224–30.

10 *KX* 1982.1.

11 *Zhengzhou Shang cheng: 1953–1985*, pp. 230–87 (originally reported in *WW* 1983.4); for more recent efforts, see Song Guoding, in *Zhengzhou Shang cheng xin faxian*, pp. 48–59, and also *WW* 2002.3.

12 In their discussion of the Outer Wall, Yuan and Zeng (*KG* 2004.5) illustrate twenty-one areas of pounded earth distributed over all parts of the Inner Wall's area.

13 Two palace compounds are reported: J1D4 (*KG* 1985.4) and J1D5 (*KG* 1988.2). The supposed granaries are reported in *KG* 1995.11.

14 *Panlongcheng: 1963–1994*, pp. 42–69. An earlier restoration by Yang Hongxun was offered in his *Jianzhu kaoguxue lunwenji* (1987), pp. 81–93 (and first published *WW* 1976.2).

15 *Zhengzhou Shang cheng xin faxian*, pp. 242–71.

16 WZC 1 (1977): 29; compare David N. Keightley, "Religion and the Rise of Urbanism," *Journal of the American Oriental Society* 93, 4 (1973): 530–31, on an earlier estimate of eighteen years.

17 Liu Shizhong and Lu Benshan, *KX* 1998.4.

18 *Zhengzhou Shang cheng: 1953–1985*, pp. 307–84 (originally reported in *KJ* no. 6 [1989]). Although a foundry site of some scale has been uncovered at the Erlitou site, no detailed report is yet available. Hence, we begin our discussion of foundries with Zhengzhou.

19 For a good up-to-date summary, see Robert W. Bagley, *Shang Ritual Bronzes in the Arthur M. Sackler Collections* (Cambridge, Mass.: Harvard University Press, 1987), esp. pp. 37–45.

20 Noel Barnard, "Wrought Metal-Working Prior to Middle Shang (?): A Problem in Archaeological and Art-Historical Research Approaches," *Early China* 6 (1980–81): 4–30.

21 Bronzes from Panlongcheng have fairly consistent high percentages of lead, especially when contrasted with northern finds. See *Panlongcheng: 1963–1994*, pp. 529–38.

22 But some evidence of early graphs does exist: see Song Guoding in *WW* 2003.5 for graphs in pigment on pottery vessels at the Xiaoshuangqiao site, north of Zhengzhou.

23 See the remarks of Robert W. Bagley, “Shang Archaeology,” in *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, ed. Michael Loewe and Edward L. Shaughnessy (Cambridge: Cambridge University Press, 1999), pp. 155–58.

24 *Zhengzhou Shang cheng: 1953–1985*, pp. 562–600, reports most burials from the site.

25 *Taixi Shangdai yizhi*, pp. 146–57.

26 *Panlongcheng: 1963–1994*, pp. 152–56.

27 Compare two other rich graves at this site: Lijiazui M1 and Yangjiawan M11. See *Panlongcheng: 1963–1994*, pp. 181–82 and 263–66.

28 See the summaries in *Xin Zhongguo kaogu wushi nian* (1999): for Hebei, that by Duan Hongzhen, pp. 45–46, and for Shandong, that by Tong Peihua, pp. 239–40.

29 See *Xin Zhongguo kaogu wushi nian* (1999), for Shaanxi, the remarks of Han Wei, pp. 430–31. Laoniupo has now been reported: Liu Shi’e, *Laoniupo: Xibei daxue kaogu zhuanke tianye fajue baogao* (Xi’an, 2002).

30 *KG* 2000.12. See also the summaries by Li Jiahe in *Zhongguo Shang wenhua guoji xueshu taolunhui lunwenji* (1998), pp. 302–6, and Peng Shifan in *Xin Zhongguo kaogu wushi nian*, pp. 218–20.

31 Reports for Wucheng: seasons 1–3, *WW* 1975.7; season 4, *WZC* 2 (1978); season 7, *WW* 1993.7. (Seasons 5–6 are reported in *Jiangxi lishi wenwu*, 1987.2, which I have not seen.) On the cultures of this region, see Peng Minghan in *KG* 2004.3. See also the essays in Gao Chongwen and Yasuda Yoshinori, *Changjiang liuyu qingtong wenhua yanjiu* (2002), especially Shi Qinsong, Zhang Xin, and Wang Xun.

32 Jiangxi Institute of Cultural Relics and Archaeology, *Xin’gan Shangdai da mu* (1997), reviewed by Shi Qinsong, *KG* 1998.9.

33 For a detailed accounting of the vessels, see Robert W. Bagley, “An Early Bronze Age Tomb in Jiangxi Province,” *Orientalions* (July 1993): 20–36.

Chapter 3. The Shang Kings at Anyang

1 In general I follow the summaries produced by members of the Anyang Work Team, in Institute of Archaeology, *Yinxu de faxian yu yanjiu*, Kaoguxue zhuanke Series A, no. 23 (1994). Publications since 1993 are also noted. Kwang-chih Chang, *Shang Civilization* (New Haven, Conn.: Yale University Press, 1980), ch. 1–4, and Robert W. Bagley, “Shang Archaeology,” in *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, ed. Michael Loewe and Edward L. Shaughnessy (Cambridge: Cambridge University Press, 1999), pp. 180–208, are also recommended for their summaries and references.

2 Cultural Relics Bureau, *Yinxu* (2001).

3 *Yinxu de faxian yu yanjiu*, pp. 419–34. *KG* 1998.10 reports preliminary results of the Sino-American Anyang survey project.

Additional reports include *KJ* no. 15 (2003) (excavations for 1998–99 at Huayuanzhuang East), *KG* 2003.5 (the Huan-bei wall and palace foundation J-1), and a detailed discussion of the latter by Du Jinpeng in *WW* 2004.5.

4 A full account is *KJ* no. 9 (1995); cf. Guo Zhenlu’s comments, *KX* 1997.1.

5 *KG* 1993.6 and analysis by Liu Yiman and Cao Dingyun in *KX* 1999.3. The formal report is Institute of Archaeology, *Yinxu Huayuanzhuang Dongdi jiagu* (2003).

6 *KG* 2001.5.

7 For studies of the clan lineages clusters, see Ge Yinghui, *Kaoguxue wenhua lunji* 2 (1989), pp. 152–83; Tang Jigen, *Shang wenhua guoji xueshu taolunhui* (1998), pp. 201–7; and Han Jianye, *KG* 1997.1.

8 Liao Genshen, *KG* 1993.10; Chen, Rapp, and Jing, *KG* 1997.7 and 2003.7.

9 David N. Keightley, *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* (Berkeley: University of California Press, 1978), p. 170.

10 See *KJ* no. 15 (2004), for eighteen stone (and jade?) *zhang* (or *ge*) with brief inscriptions in ink found in tomb 1046 at Liujiazhuang North, a period IV burial.

11 *KG* 1993.10; Liu Zhao, *KG* 1995.7.

12 On human imagery in Shang, see the essay by Xu Lianggao, in *Qizhiji* (1996), pp. 334–52.

13 The observation of Jessica Rawson, *Mysteries of Ancient China* (London: Britain Museum, 1996), p. 118; compare the phoenix from Luojiaboling, *KX* 1994.2:226.

14 Zheng Zhenxiang, in *Qingzhu Su Bingqi* (1989), pp. 315–25.

15 Li Jianmin, in *Shang wenhua guoji xueshu taolunhui* (1998), pp. 366–74.

16 See Liu Yiman's detailed study, *KG* 2002.3.

17 Wang Wei, in *Shang wenhua guoji xueshu taolunhui* (1998), pp. 380–88; Edward L. Shaughnessy, "Historical Perspectives on the Introduction of the Chariot into China," *Harvard Journal of Asiatic Studies* 48, 1 (1988): 189–237. See also Anthony J. Barbieri-Low, "Wheeled Vehicles in the Chinese Bronze Age (c. 2000–741 B.C.)," *Sino-Platonic Papers* 99 (February 2000): i–v, 1–98.

Chapter 4. Shang Cult: Divination and Sacrifice

1 My understandings of Shang divination and indeed most topics that flow from it are fundamentally indebted to the writings of David N. Keightley; see Suggested Readings for citations of several of his most stimulating works.

2 Liu Yiman, *KG* 1991.6 and *KG* 1997.5.

3 David N. Keightley, *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* (Berkeley: University of California Press, 1973), p. 170.

4 *KJ* 9 (1995); Guo Zhenlu in *KX* 1997.1.

5 *KG* 1993.6 and analysis by Liu Yiman and Cao Dingyun in *KX* 1999.3.

6 *KG* 2003.6 reports a new find of inscribed oracle-bones at Daxinzhuang, near Jinan, Shandong. For preliminary analysis, see *KG* 2004.2.

7 The terms employed here follow Keightley, *Sources of Shang History*, pp. 28–45.

8 See the debate in *Early China* 14 (1989): 77–172.

9 See David N. Keightley, "The Religious Commitment: Shang Theology and the Genesis of Chinese Political Culture," *History of Religions* 17 (1978): 211–25, esp. pp. 216–17.

10 Earlier studies based on my database appeared as "The Archaeology of Style at Anyang: Tomb 5 in Context," *Archives of Asian Art* 41 (1988): 47–69, and "Bronze Inscriptions at Anyang: From Archaeological to Systemic Context," (forthcoming). A new study by Yue Hongbin establishes a comprehensive database for bronze vessels excavated around Anyang and reconsiders their periodization; see *KJ*, no. 15 (2004).

11 Institute of Archaeology, *Anyang Yinxu Guojiazhuang Shangdai muzang: 1982 nian–1992 nian kaogu fajue baogao*, Kaoguxue zhuankan Series D, no. 60 (1998), p. 81.

12 See the study of Liu Yiman, KX 1995.4.

13 KG 2001.5:25.

Chapter 5. The Late Shang World

1 See David N. Keightley, *The Ancestral Landscape: Time, Space, and Community in Late Shang China (ca. 1200–1045 B.C.)*, China Research Monograph 53 (Berkeley: Institute of East Asian Studies, University of California, 2000), pp. 55–79.

2 Including the newly reported inscribed oracle-bones; KG 2003.6 and KG 2004.2. KG 2004.7 summarizes recent work at the site.

3 Gao Guangren in KX 2000.2. Gao discusses eighteen states for which some evidence (inscriptions, sites, or bronzes) can be plotted on a map, but this is a mere fraction of the total number of states/peoples named in epigraphic sources. Fang Hui, in KG 2004.4, makes a strong case for salt production in Shandong.

4 Reported in KG 1981.2 and KX 1986.2.

5 Reported KG 2000.9, and in the monograph: Henan Institute of Cultural Relics and Archaeology, *Luyi Taiqing Gong Chang Zi Kou mu* (Zhengzhou, 2000).

6 For Sufutun, see WW 1972.8; *Haidai kaogu* 1 (1989); for Qianzhangda, see KX 1992.3 and KG 2000.7.

7 Beijing Cultural Relics Institute, *Liulihe Xi Zhou Yan guo mudi* (1995).

8 Liu Shi'e, *Laoniupo: Xibei daxue kaogu zhuan ye tian ye fajue baogao* (Xi'an: Shaanxi Renmin, 2002).

9 A good recent overview is Wang Wei and Xu Lianggao, KX 2000.3. Compare also Edward L. Shaughnessy, "Western Zhou History," pp. 305–7, and Jessica Rawson, "Western Zhou Archaeology," pp. 375–82, in *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, ed. Michael Loewe and Edward L. Shaughnessy (Cambridge: Cambridge University Press, 1999). Zhang Tian'en discusses the evidence from western *guanzhong* in KX 2004.1.

10 Edward L. Shaughnessy, "The Extent of the Earliest Chinese Kingdoms," *Asia Major* 2, 2 (1989): 1–22.

11 KG 1989.8; He Nu in *Kaoguxue yanjiu* 2 (1994): 78–100; cf. WZC 10 (1987).

12 KG 1980.3 lists twelve find spots yielding 486 items (mostly a rich variety of weapons). *Shaanxi chutu Shang Zhou qingtongqi* (1979) illustrates many of these finds; see nos. 99–123. See also Northwest University Cultural Relics and Museology Program, *Chenggu Baoshan: 1998 nian fajue baogao* (2002) for excavations nearby.

13 KG 1985.1.

14 KX 1992.2; the evidence as reported to date is slight: a furnace with slag, and several stone casting molds.

15 Virginia Kane, "The Independent Bronze Industries in the South of China Contemporary with the Shang and Western Chou [Zhou] Dynasties," *Archives of Asian Art* 28 (1974–75): 77–107; Robert W. Bagley, "Changjiang Bronzes and Shang Archaeology," in *International Colloquium on Chinese Art History, 1991, Proceedings, Antiquities, Part I* (Taipei: National Palace Museum, 1992), pp. 209–55.

16 Reports for Wucheng: seasons 1–3, WW 1975.7; season 4, WZC 2 (1978); season 7, WW 1993.7. (Season 6 is reported in *Jiangxi lishi wenwu*, 1987.2.)

17 Jiangxi Institute of Cultural Relics and Archaeology, *Xin'gan Shangdai da mu* (1997). Review by Shi Jinsong, KG 1998.9. For a detailed accounting of the

vessels, see Robert W. Bagley, “An Early Bronze Age Tomb in Jiangxi Province,” *Orientations* (July 1993): 20–36.

18 Liu Shizhong and Lu Benshan, *KX* 1998.4 for the mining site; *KG* 2000.12 for Tanshuzui.

19 First site report: *KX* 1987.1; compare the discussion by Jay Xu, “Sichuan Before the Warring States Period,” in Robert W. Bagley, ed., *Ancient Sichuan: Treasures from a Lost Civilization*, (Seattle: 2001), pp. 21–37. Also the essays in Sun Hua, *Sichuan pendì de qingtong shidai* (2000). Burials outside the wall at Ren-shengcun are reported in *KG* 2004.10.

20 Chengdu Institute and Beijing University, *jinsha tao zhen: Chengdu shi jinsha cun yizhi chutu wenwu* (2002). The Meiyuan site is reported in *WW* 2004.4.

21 Yang Nan in *KX* 1999.1.

22 For example, at Xiaqiyan, Cixian, on the north bank of the Zhang in Hebei; *KX* 1979.2.

23 My summary above is derived from Liao Genshen, in *KG* 1993.10; for studies utilizing neutron activation analysis, see Chen, Rapp, He, and Jing, in *KG* 1997.7 and 2003.7.

24 At Wucheng, *WW* 1989.1; at Shangyu, *KG* 1987.11; cf. *KG* 1996.4 (finds in the Shaoxing area).

25 Jenny So, “Jade and Stone at Sanxingdui,” in *Ancient Sichuan*, ed. Bagley, pp. 153–60.

26 *WW* 1979.10 (Fengchu) and *WW* 1981.1 (Zhaochen); compare renderings in *WW* 1981.1, by Fu Xinian, and *WW* 1981.3, by Yang Hongxun.

27 *KG* 2002.9 reports impressive compounds at Yuntang and Qizhen, each of Western Zhou date; *KG* 2004.1 briefly describes graves and traces of bronze casting.

28 Shaanxi Institute of Archaeology, *Feng Hao Xi Zhou gongshi* (Xi’an, 1995).

29 *WW* 1988.6; see also the discussions of Shang in the Guanzhong region by Xu Tianjin in *jinian Beijing daxue kaogu zhuan ye sanshi zhounian lunwenji, 1952–1982* (1990), pp. 211–42; and Lu Liancheng, in *Shang wenhua* (1998), pp. 237–57.

30 Sun, *Sichuan pendì de qingtong shidai*, pp. 286–301.

31 Sichuan Institute of Cultural Relics and Archaeology, *Sanxingdui jisi keng* (1999).

32 Chengdu Institute, *jinsha tao zhen* (2002); *WW* 2004.4.

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Acknowledgments

I have been fascinated by the Shang since a day in 1971 when I first walked into a gallery at the National Palace Museum, Taipei, and there came face-to-face with a marble owl excavated in the 1930s from the royal tombs at Anyang (see Figure 3.18). Nearby, reverently displayed in velvet-lined boxes, were whole plastrons and scapulas with oracle-bone inscriptions that I could barely discern and had no hope, then, of being able to read. The impressions were indelible.

In graduate school, I began to read the works of Kwang-chih (K. C.) Chang (Harvard University; see Box 4) and David N. Keightley (University of California, Berkeley). Through their writings, Professors Chang and Keightley taught me the rudiments of Shang studies, and even encouraged me to plunge into this field myself. Both generously read and critiqued my early writings. My debts to them are evident, and usually credited, throughout this book.

In the 1990s, while associated with the Committee on Scholarly Communication archaeology initiative, I also got a rapid introduction to anthropological archaeology from my colleagues Patty Jo Watson (Washington University in St. Louis) and C. Melvin Aikins (University of Oregon). Going into the field with them in China was a great learning experience, and I began to feel like a real “dirt” archaeologist. I owe my introduction to Chinese archaeology in practice to Professor Yu Weichao (1933–2003) and his colleagues at the National History Museum, especially Xin Lixiang and Cao Bingwu. I have an even greater debt to Tang Jigen, Institute of Archaeology, and Jing Zhichun, University of British Columbia, the movers behind the Anyang Project (see Box 13). As head of the Anyang Work Team, Tang asked me to participate for four seasons in 1997–99, even though I remain utterly clueless about some of the basic skills of pottery analysis. Tang and the senior members of the work team—Zheng Zhenxiang, Yang Xizhang, and Xu Guangde—gave me unlimited access to their collections and shared personal experiences. At the Institute of Archaeology in Beijing, I have been helped

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